Advanced View Of Projects Raspberry Pi List

List of Projects using Raspberry Pi with advance view:

1.

   How to Make a Mini Fridge A fridge is a piece of kitchen equipment used to preserve food. It uses cold air to reduce the growth rate of bacteria and slow down the chemical changes happening inside the food, keeping it fresh for longer. Big household fridges utilize a process that..... Listed under: Other Projects

2.

   Neoway N58 Cellular Module basic usage n Configuration with raspberry pi The Neoway N58 is a cellular module that allows devices to connect to cellular networks and send/receive data over the internet. It can be used with a Raspberry Pi to add cellular connectivity to your projects. Here are the basic steps for using the Neoway..... Listed under: GPS Based Projects, Internet - Ethernet - LAN Projects, Phone Projects

3.

   Poor Man's Bi-ped Robot Controller – Using RP2040 and Micropython The Poor Man's bi-ped Robot - using RP2040 and Micropython project consists of three instructables: Poor man's bi-pedRobot Hardware describes how to build the robot hardware and documents the electronics to run the servos which move the robot. Poor man's bi-ped Robot Controller(this instructable) describes the software which is running..... Listed under: Robotics - Automation Projects

4.

   Pfsense for Raspberry PI pfSense is a free and open-source firewall and router software distribution based on FreeBSD. It is designed to provide a secure and scalable networking solution for small and medium-sized businesses, as well as home networks. Some of the main features of pfSense include: Firewall: pfSense..... Listed under: Internet - Ethernet - LAN Projects

5.

   Android to raspberry pi Can raspberry pi run android? Yes we can. Yes, it is possible to run Android on a Raspberry Pi. However, it is important to note that the Raspberry Pi is not designed to be a general-purpose desktop computer and may not have the necessary hardware..... Listed under: Raspberry RTOS – OS Projects

6.

   How to install home assistant on raspberry pi 4 To install Home Assistant on a Raspberry Pi 4, you can follow these steps: Install the latest version of Raspbian on your Raspberry Pi. You can download Raspbian from the official Raspberry Pi website and install it using a tool such as Etcher. Once Raspbian is..... Listed under: Home Automation Projects

7.

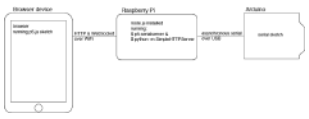
   Switchbot diy using raspberry pi SwitchBot is a smart home automation device that can be controlled remotely using a smartphone app or voice assistants such as Amazon Alexa or Google Assistant. It can be used to remotely control a variety of devices, such as lights, appliances, and thermostats, by physically..... Listed under: Home Automation Projects

8.

   Telegram Control Application With Raspberry Pi Step 1: Using of Telegram Bot API and RPI GPIO Modules To write application code I used two modules for NodeJS. One of them is Telegram Bot API module and the other one is Raspberry Pi GPIO module. Using Telegram Bot API you can create your own bot..... Listed under: Other Projects

9. Building a Raspberry PI home server I wrote a few articles previously about setting up a home server using an off the shelf NAS. The brand doesn't really n r: they are all packed with features that help you move your files from the cloud back into your network and give you access to apps and services that cover

what..... Listed under: Home Automation Projects

10. 

Lab: Arduino and p5.js using a Raspberry Pi Introduction For some applications, you only need a computer with an operating system in order to connect a serial device like an Arduino or other microcontroller with a browser-based multimedia application like p5.js. Perhaps you're planning to run the sketch on a mobile device like..... Listed under: Other Projects

11.

Raspberry Pi As Completely Wireless Router This instructable is to create a wireless router from a raspberry pi and a wireless adapter, None of this work is original just pieced together after several fails I hope this helps. My sources are: https://howtoraspberrypi.com/create-a-wi-fi-hotspo... https://github.com/billz/raspap-webgui https://github.com/billz/raspap-webgui/issues/141 contributor Caxton1 For this project I used a..... Listed under: Other Projects

12.

Using a Raspberry PI Zero W As an Access Point and MQTT Broker The goal of this project is to create a wireless access point using a Raspberry PI Zero W. The access point or AP (for short) will not need access to the internet. Instead it will provide a private (intranet) network that can be used for..... Listed under: Robotics - Automation Projects

13.

Flash the onboard green LED of the Raspberry Pi. You have probably already seen that the Raspberry Pi has two LEDs directly soldered to the board, one red and one green. But did you know that it is possible to control this green LED, and sometimes even the red one? In this tutorial, we..... Listed under: LED Projects

14.

Getting started with Raspberry Pi Connect your Raspberry Pi Let's connect up your Raspberry Pi and get it running. Check the slot on the underside of your Raspberry Pi to see whether an SD card is inside. If no SD card is there, then insert an SD card with Raspbian..... Listed under: Projects

15.

Connect Raspberry Pi to laptop PC in 4 simple steps (internet too) Step 1. Get all things ready to connect Raspberry Pi to laptop PC You will need: A working PC duh! (internet connection is not required if you have all other things ready) A Raspberry Pi (Zero, Raspberry Pi 2, Raspberry Pi 3, If you have other versions do..... Listed under: Internet - Ethernet - LAN Projects

16.

Setting Up Raspberry Pi 3 The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to..... Listed under: Video - Camera - Imaging Projects

17.

Weather Lamp Weather Lamp is a RGB lamp made using Wiznet Pico WizFi360 and WS2812B LED's. The lamp simulates the real-time weather using the openweathermap.org API. It read parameters like cloud intensity, temperature, time and try to mimic the cloud colors, sun/moon and change the base color as temperature..... Listed under: Other Projects

18.

Building a MIDI Controller / MacroPad I love tinkering with the Raspberry Pi Pico, since it is an easy starting point for anyone that wants to get into microcontrollers. In this detailed instructable I want to guide you how you can create your own MIDI controller or MacroPad. If you are a musician..... Listed under: Other Projects

19.

Smart Letterbox The Smart Letterbox is a device that serves the same purpose as a traditional mailbox, only here it is done in a user-friendly way. And all of this with just a few sensors and an LCD display! First of all, you don't have to check..... Listed under: LCD Projects

20.

Fytó – Turn Your Plant Into Pet Fytó is a smart planter that can easily turn your plant into a pet. It comes with built-in sensors that measure everything from light exposure to soil moisture which can trigger six different emotions that will communicate how your plant is doing. The emotions are displayed..... Listed under: Other Projects

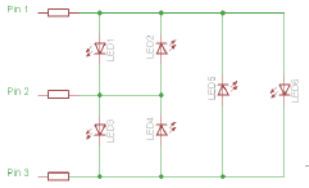
21. Multiplayer Wack a Mole I made a multiplayer wack a mole style game that is compatitive and fun! Supplies List of needed materials: 2x wooden plate 2x side wooden plate 20 springs raspberry pi ledstrip 2x button 20x hall sensors RFID gyroscope buzzer arduino pcb magnets jumper cables +- 60 meter cable Step 1: Make..... Listed under: Other Projects

22.

[INap Malinka, Your NRF24L01 Transmitter That Can Play Pokemon](#) iNap Malinka was mostly made as a decent, Raspberry Pi-based NRF24L01 transmitter. But, as it turns out, you can also play games on it! Malinka is a small DIY handheld that runs RetroPie, allowing it to play any retro game, including ports. However, because it's..... Listed under: [Game - Entertainment Projects](#)

23.

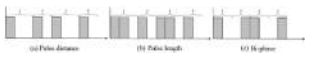
[Raspberry Pi Controlled Water Cistern With Web Interface](#) Hi there! As a Multimedia and Creative Technologies student at Howest Kortrijk (Belgium) I had the opportunity to make my own IoT-project from scratch. A smart rainwater cistern keeps your rainwater tank from getting out of water. This IoT-system knows when your cistern is getting..... Listed under: [Sensor - Transducer - Detector Projects](#)

24. 

[Charlieplexing with the RaspberryPi](#) To combine our knowledge of hardware and software by implementing Charlieplexing on the Raspberry Pi as our project's hardware. Control six LEDs in different sequences using the Raspberry Pi (GPIO) and the internet. Using the Apache and PHP servers installed on the Raspberry Pi for..... Listed under: [LED Projects](#), [Projects](#)

25.

[Raspberry Pi Pico Thermometer & Clock](#) Dear friends welcome to another tutorial! Today we are going see how to build this low-cost real-time clock and thermometer with a color TFT display using CircuitPython on a Raspberry Pi Pico board. 6 years ago, I built a similar project using an Arduino Uno..... Listed under: [Clock - Timer Projects](#)

26. 

[Turning Legacy IR Devices into Smart IoT Devices](#) Introduction The Internet of Things (Smart IoT Devices) is a globally linked network of uniquely addressable items. Many household items, such as televisions, fans, air conditioners, and toys, contain infrared receivers and are operated by an infrared remote. We may wish to link these..... Listed under: [Internet - Ethernet - LAN Projects](#), [Projects](#)

27.

[Life Sized Talking BMO From Adventure Time (that's Also an Octoprint Server!)](#) Who WOULDN'T want their own life sized BMO who could say nice things and help control their 3D printer?? I love using Octoprint to control my 3D printers, an open source plugin and web interface that gives incredible remote access to any 3D printer with a USB..... Listed under: [Robotics - Automation Projects](#)

28.

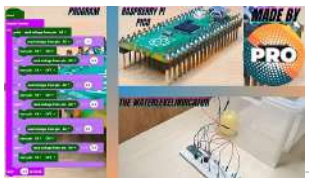
[Air Insight: Air Quality Monitor With Raspberry Pi](#) The air insight air quality monitor is a device that lets you monitor the indoor air quality. It measures Co2, particulate matter, volatile organic compounds, temperature, relative humidity and atmospheric pressure. All with the use of just three sensors. Depending on the air quality, the..... Listed under: [Other Projects](#)

29.

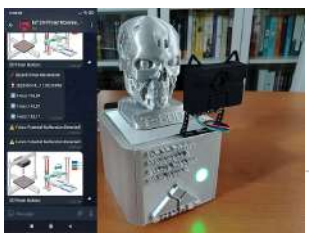
[Making a Small Mac From a Raspberry Pi 3](#) In this Instructable we are making a slightly larger version of the Tiny Mac. There are a couple of reasons you might want to make this version. Supply chain issues (it is almost impossible get a Raspberry Pi Zero) A larger screen This version uses a..... Listed under: [Other Projects](#)

30.

[Gesture Recognition Using Raspberry Pi Pico and Edge Impulse](#) The way of running ML on a microcontroller is called Embedded ML or TinyML. So, In this tutorial, we will learn how to use the MPU6050 Accelerometer and Gyroscope sensor with the Raspberry Pi Pico and the TinyML Edge Impulse web platform in order to implement a Hand Gesture..... Listed under: [Development Board - Kits Projects](#)

31. 

[Raspberry Pi Pico Water-level-indicator Using Potentiometer](#) Hello, I am a school student from Germany and this is my first Instructable. I'm excited to show you how to make a water-level-indicator using Raspberry pi Pico and a Potentiometer. My parents gifted me the Raspberry pi Pico for Christmas and immediately I started..... Listed under: [Metering - Instrument Projects](#)

32. 

[AI-driven IoT 3D Printer Motion & Status Tracker W/ Telegram](#) Track lateral and vertical movements of a 3D printer via AprilTags. Then, get informed of malfunctions related to motion via Telegram. Supplies 1 x Raspberry Pi Pico 1 x WIZnet Ethernet HAT 1 x DFRobot HuskyLens AI Camera 1 x Raspberry Pi 3B+ or 4..... Listed under: [GPS Based Projects](#)

33.

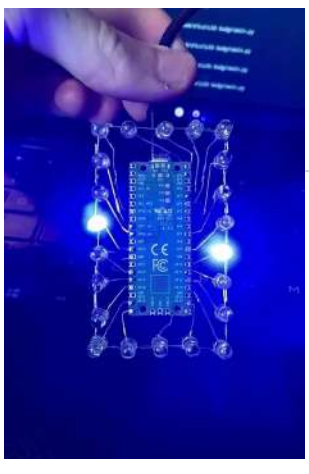
[Retropie Arcade] Feeling nostalgic? Want a blast from the past? This Instructable details how to make your own RetroPie Arcade Machine and play with all your favorite video-game characters again, like Ms. Pac-Man, Donkey Kong, and Frogger to name a few. I decided to build my own..... Listed under: [Game - Entertainment Projects]

34.

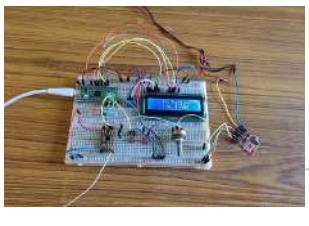
[Smart Garbage] I am an MCT student from Howest in Kortrijk, Belgium. My project is a Smart garbage using a Raspberry Pi 4. Its purpose is to easily keep track of how much trash is produced over a period of time. When the bin is full, the garbage collector can be notified. The..... Listed under: [Sensor - Transducer - Detector Projects]

35.

[Interactive Sound Toy] For a while now, I wanted to create a children's toys, but with a tech-twist. As a first take in the field, thought it would be interesting to do something related to those old-school farm animal sound toys. I am talking about the ones with..... Listed under: [Sound - Audio Projects]

36. 

[Raspberry Pi Pico LED Badge] This project involves soldering. If you have little or no experience with soldering, make sure you have someone you trust walking you through the project. Always be in a properly ventilated environment when soldering, as it may release toxic fumes into the air. This project..... Listed under: [LED Projects]

37. 

[Raspberry Pi Pico and TEA5767 FM Radio] In this Instructables we are going to make a FM radio receiver using raspberry pi pico and TEA5767 FM receiver chip. Here I am using micropython programming language to program the Raspberry pi pico. let's get started! Supplies List of hardware: Raspberry pi pico TEA5767..... Listed under: [Sound - Audio Projects]

38.

[RaspiCar (RC Car With 4WD)] For a school project in my bachelor MCT at Howest Kortrijk, I made an RC car. This project is a RC car with extra features. The car can be controlled via a web dashboard, has collision detection and stops automatically when it detects a red..... Listed under: [Car Projects]

39.

[Project One: Alcohol Lock] For my first project, I will make an alcohol lock with a Raspberry Pi. Short: The alcohol gas sensor will detect the percentage of alcohol in your breath and then decides if you're safe to drive the car or not. If so, then the starter..... Listed under: [Security - Safety Projects], [Sensor - Transducer - Detector Projects]

40.

[Pi Cam – a Remote Raspberry Pi Desktop/Camera/Server] Pi Cam is a 3D Printed Remote Raspberry Pi Desktop/Camera/Server, It' can be your 3D Printer monitoring system, Camera (Record Photos/Videos/Time-lapse), Server, and a Linux desktop. And the good part is because we are using Remote-it service we can access all this remotely from anywhere..... Listed under: [Video - Camera - Imaging Projects]

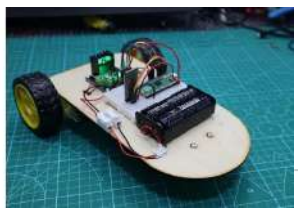
41. [RPI and 5 Inch LCD Digital Album and Weather Station] This is 5 inches LCD digital photo album using Raspberry Pi (RPI) Wireless Zero and a weather station device displaying humidity, temperature, and air pressure information. Maybe this is the most upgraded and functionally versatile device among the weatl station circuits I made before. It..... Listed under: [LCD Projects]

42. Kids-In-Space Space Craft Simulator When my 5-year-old son started showing an interest in Space and Planets, I was prompted to start building him a spacecraft simulator. He also started asking questions about chemicals, so combining the two, I set him aboard a space shuttle that allows him to explore..... Listed under: Other Projects

43. Modular Solar/UPS for Raspberry Pi 4B Do you want to build a uninterruptible power supply (UPS) system which will keep your Raspberry Pi 4B online 24/7/365 without hassle? This isn't one of those gimmicky tutorials which uses a tiny cell phone charger with an 18650 battery built in that is technically capable of..... Listed under: Battery Projects, Solar energy projects

44. Self Driving Car Donkey is a self-driving car platform meant to convert RC cars into autonomous ones. It's a self-driving library written in Python. Its Open Source hardware allows anyone, including myself, to build their own car! This project was created by Sanjhee Gupta in association with Berbawy..... Listed under: Car Projects

45. DIY Smart Mirror This guide shows everything I did in order to build my Raspberry Pi Smart Mirror. With the Smart Mirror, I am able to access the weather, time, and news, as well as several other custom modules. I would like to thank Ms. Berbawy and the..... Listed under: How To - DIY - Projects

46.  Simple Bluetooth Controlled Car – Raspberry Pi Pico Hello fellow makers and tinkerers, I am back with another simple, easy-to-follow project based on the Raspberry Pi Pico. Using easy-to-find components, we will be making a 2-wheel drive the motor car controlled through a Bluetooth module on an android APP made by MIT app..... Listed under: Bluetooth Projects, Car Projects

47.

The Super Easy Pico Keyboard This is the easiest Raspberry Pi Pico to Keyboard tutorial. You can make in easy visualized steps a functioning Macro keyboard, Password keyboard, or anything that you can do with a keyboard. I am also the original author and have made this tutorial in Dutch for the..... Listed under: Other Projects

48. Raspberry Pi Digital Camera I have always had a passion for photography, and so in this instructable, I will describe how I created my own Raspberry Pi Digital Camera. I began creating this digital camera with 3 objectives: To have a small lightweight camera To make it unique To..... Listed under: Blog, Video - Camera - Imaging Projects

49. Board Game Table With End Turn Buttons The Problem: "Whose turn is it?" "Well, I've already moved my guy so it can't be me" "Oh, I thought we were on a new round so I already went!" "You can't go, we haven't reset the board for the round yet!" "Ok, so whose..... Listed under: Game - Entertainment Projects

50. Electronic MasterMind Game “A battle of wits and logic between two players. Break the secret code.” This is an electronic version of the classic 70’s Super Master Mind board game. The object is to guess the code that has been selected by the computer in as few moves..... Listed under: Game - Entertainment Projects

51. Gourdan: the Eye Following Jack-O-Lantern Meet Gourdan, the Jack-O-Lantern who follows tricker treaters to the door and back with his eyes. My sister and I both married Halloween fanatics. Anything from scary movies to decorations, our spouses love everything spooky. Growing up I hated scary movies and my family never..... Listed under: Other Projects

52.

[TELEBOT (Remotely Control and Monitor Your Home)] In this Instructable I'am going to tell you about how to make a complete "HOME AUTOMATION" package using some basic Electronic controllers and some Open source software. This Project will go this way: We will use Raspberry Pi as a Hub for smart home devices..... Listed under: Other Projects

53.

[Pico Arcade Mini] Pico Arcade Mini is made from low-cost, readily available parts from eBay and similar retailers for around £30 ($50). It uses a unique 3D Printed Circuit Board (3D-PCB) that eliminates connectors, fussy wiring, confusion over where wires go and makes any project super slim and..... Listed under: Other Projects

54.

[7×5 E-Paper METAR Display] Being a avid aviation buff and pilot, and wanting to learn how the E-Paper display worked I set out to create a METAR Display. It snowballed into a full blown application with multiple display layouts to choose from. This project uses the 7x5 3-color E-Paper..... Listed under: Other Projects

55.

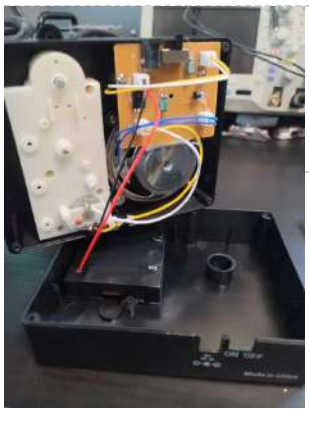
[Infinity Macro Pad Using Pi Pico] Hello DIY makers and coders.... Today I'm presenting my version of a custom Macropad with a Raspberry Pi Pico.... I named this as "Infinity Macropad 1.1"....the project is based on the adafruit Circuit Python and runs HID functionality onboard.... This Macropad has 20 individual tactile..... Listed under: LED Projects

56.
[Pico Based Number Pad] Today I am going to build a Raspberry Pi Pico-based number pad. I am going to build a simple ortho linear number pad with 20 switches. Then I am going to go through how I installed KMK firmware on it. KMK can be installed on..... Listed under: Other Projects

57. [A LEGO® Robot Pumpkin] I built a LEGO® Robot Pumpkin, using a Raspberry Pi and the new Build HAT that allows you to control the LEGO® Education kits. Raspberry Pi has a great tutorial for the face and you can then use an existing machine learning model to help..... Listed under: Robotics - Automation Projects

58.
[Heat Piping the Raspberry Pi] It's been a while since I've created any noteworthy projects, but here is something that will hopefully turn some heads. I've been tinkering with the Raspberry Pi 4 in the last year or so and have noticed that there aren't any great cooling products out..... Listed under: Other Projects

59.
[PALPi Version 2, Big Edition] Hey Everyone what's up, So here's something cool. This is PALPi Version 2 which is a Huge Retro Game Emulator system with a 7-inch display and custom PCB! Recently, I got a Raspberry Pi IPS Touch 7-inch Display from the PCBway gift shop and I thought "Hey, let's..... Listed under: Game - Entertainment Projects

60. 
[Making Your Halloween Decorations Smart With Phidgets] In this project, I will show you how you can make some of your standard Halloween decorations "smart" using Phidgets and a Raspberry Pi. This can be done with almost any decoration that is powered, but it's best if you have a decoration with a..... Listed under: Other Projects

61. [Bartop 2 Players – Laser Cut] This tutorial offers you to make a Bartop arcade 2 players totally made in laser cutting. Along with this tutorial, you can also find a Stick Arcade model of this creation (without screen or speakers). The cheaper arcade stick is suitable for more mobile use or for using your..... Listed under: Other Projects

62.

[Acrade Strick 2 Players – Laser Cut](#) This tutorial suggests that you make a 2 player Arcade Stick totally laser cut. Along with this tutorial, you can also find a Bartop Arcade model of this creation (with screen and speakers). The more expensive Bartop Arcade is perfectly suited, as its name suggests, as a public or private..... Listed under: [Other Projects](#)

63.

[Gom Jabbar From Dune](#) In this tutorial, I will walk you through the process of creating the black box in the pivotal scene from Dune where the Reverend Mother Gaius Helen Mohiam tests Paul Atreides. The Gom Jabbar is the name for the handheld needle tipped with meta-cyanide poison..... Listed under: [Video - Camera - Imaging Projects](#)

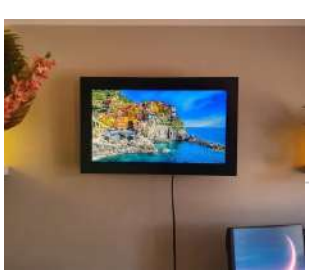
64. [Quantum Death Machine](#) 💀 Supplies Tools: 3D printer Table saw Parts: Raspberry Pi 3 Adafruit Thermal Printer & thermal paper roll Fingerprint sensor Arduino Nano Plywood(200cmx25cm) in total Chestnut varnish Step 1: Introduction to Quantum Computing [embed]https://youtu.be/OWJCfOvochA[/embed] Classical computers that we use in our daily lives: phones, tablets, computers,..... Listed under: [Other Projects](#)

65.

[Seismograph](#) Professional quality seismograph, fully open source, based on a Raspberry Pi, with 1 to 4 components, able to record earthquakes or other seismic events, either natural (rockfall, glacier movement) or man-made (train detection, vehicle detection). The seismograph works either autonomously in the field, or can be..... Listed under: [Other Projects](#)

66.

[Tiny Audio Effects Rig!](#) In this instructable I am going to talk through a project I have created - a tiny audio effects rig and recording platform! As with most hobbyists Coronavirus brought to a halt a lot of things, with lockdowns, and has changed the landscape of how..... Listed under: [Sound - Audio Projects](#)

67. 

[DIY Raspberry Pi 24" Digital Picture Photo Frame](#) The idea behind this project was to build a large digital picture frame at a lower cost than the ones you could purchase. It needed to be easy to build and operate smoothly. I concentrated on setting up the computer/software side first before building a..... Listed under: [Video - Camera - Imaging Projects](#)

68.

[Traffic Radar Speed Sensor and Camera That Recognizes License Plates](#) Want to track the license plates of speeding cars with a traffic camera that is 40 times cheaper than that of a commercial one? This Instructable shows how you can use the Raspberry Pi, Camera Module v2, 8x8 LED Matrix,and OPS243 Radar Sensor to obtain the license plates of..... Listed under: [Sensor - Transducer - Detector Projects](#)

69.

[Realtime Drowsiness and Yawn Detector Using Raspberry Pi or Any Other PC](#) In the current epoch, drowsy driver detection is the most necessary procedure to prevent any road accidents. So this project is about building a system, which can detect the drowsiness of the user and alert the user so that an accident can be prevented. Also,..... Listed under: [Sensor - Transducer - Detector Projects](#)

70.

[Raspberry Pi Iron Man Helmet With "Heads Down" Display](#) For my final project I decided to create an Iron Man Helmet with dual motors and a transparent OLED "Heads Down" Display powered by a Raspberry Pi with an Adafruit Crickit Hat. I wanted to do my own take on how I would create an..... Listed under: [Robotics - Automation Projects](#)

71.

[Magic 8 Ball (Magic 2 Ball) With Voice, Round Color LCD Screen and Motion Sensing](#) In the long tradition of fortune telling Magic 8 Balls I created a self-contained Magic 2 Ball running a Raspberry Pi Zero 2. When you shake the ball and turn it over, the answer tile is displayed on a round screen and the answer is..... Listed under: [LCD Projects](#)

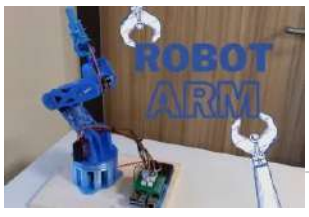
72.
Another Raspberry Pi Cluster I recently build a Raspberry Pi cluster in a custom case running K3S Kubernetes. A lot of positive feedback after sharing some images of the final design, and people asking questions about the build. I decided to share the process of making it and my thoughts during the..... Listed under: Other Projects

73.

PALPi Version 2, Final Edition Hey Everyone what's up, This is the PALPi V2 which is a huge handheld retro gaming console powered by a Rpi 3 B+. [embed]https://youtu.be/VnZ5W9pDypk[/embed] [embed]https://youtu.be/Cd7uO9Eg5Zo[/embed] The goal for making this project was to make a low-cost game console like a Nintendo Switch or Steam Deck..... Listed under: Other Projects

74.
Encrypted Data Vault: Raspberry Pi Pico + ESP32 Version Day after day, it's getting harder to keep your data private. There's too much demand for it coming from multiple sides. Different sides might have different reasons to obtain your data, but does it matter for you? Does it really matter why your data is..... Listed under: Other Projects

75.
Fritzmeter Did you ever wanted to know what the current usage of your internet connection is? I was interested in checking whether the internet service or my internet connection was the bottleneck. After a couple of days, I now know that some services I use like..... Listed under: Internet - Ethernet - LAN Projects

76. 

3D Printed Raspberry Pi Robotarm This is a school project for my informatic class. I recreated an other design from here. Step 1: Story The rough plan: A glove that tracks the movements of the hand and then sends it via WiFi to a Raspberry Pi, which runs a program that..... Listed under: Robotics - Automation Projects

77.
Raspberry Pi Zero W Based Personal Temperature Controller Space heaters usually come with a thermostat for temperature control. The temperature control is done at the heating device and are might not be where you are located. Also, a lot of the space heaters just have a numbered dial for temperature control and not..... Listed under: Temperature Measurement Projects

78.
AutoBill – AI Powered Instant Checkout AutoBill is an AI-powered autonomous checkout system for retail stores, that combines the power of computer vision and machine learning to provide an amazing shopping experience. AutoBill provides a faster checkout shopping experience to minimize human interactions in the store to keep shoppers and employees..... Listed under: Other Projects

79.
Build Your Own Google Home-Enabled Smart Mirror in About Two Hours In this guide I'll teach you how to build your own simple Google Home-enabled magic mirror using a Raspberry Pi computer and Google's AIY Voice Kit. A few years back I built a complicated smart mirror that used an open-source voice assistant called Jasper. But that build..... Listed under: Home Automation Projects

80.

Security System With Motion Detection The system is designed to detect intrusion (unauthorized entry) into a building or other area. Step 1: Things Used in This Project Hardware components KEMET Electronics Corporation Proximity Sensor- Pyroelectric Infrared Sensor Module×1 Raspberry Pi Zero×1 Raspberry Pi Camera Module V2×1 Buzzer×1 LED (generic)×2 Arcade..... Listed under: Security - Safety Projects

81.

Raspberry Pi Pico 200Khz Digital Oscilloscope A Waveform analyzer, Signal generator and logic tester in a small PI PICO. With a dedicated application, Runs on Android. Supplies Things needed for this projects: 1) Smart phone as display unit 2) Raspberry pi Pico 3) 1k, 100k resistors 4) Breadboard, jumper and usb..... Listed under: Other Projects

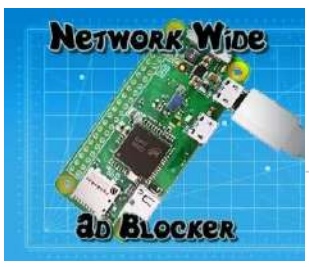
82.
Smart Device Controller Weather Station Using IFTTT I created this project to turn an air purifier on and off based on the current weather. Mine depends on temperature, wind speed and direction. Any weather information could be used in your project. IFTTT (If This Then That) applets are called to turn..... Listed under: Other Projects

83.
All Sky Camera Enclosures. I have designed three* 3D printable cases which each use clear Acrylic tubes as enclosures. Additional printed parts help enclose the Raspberry Pi HQ Camera, a wide angle lens, and the electronics. The tube is sealed with printed flexible seals. All three* designs easily fit..... Listed under: Video - Camera - Imaging Projects

84. Making the Ultimate Water-cooled Raspberry Pi Desktop Computer If you've been following my Instructables for a while then you're probably aware that I like to do unnecessary things, like building a water-cooled Raspberry Pi cluster. This was a fun project but isn't all that practical for everyday use. So in this Instructable, we're going..... Listed under: Other Projects

85.

[SNES Pi From a Broken Super Nintendo] This project is for transforming a non-functional SNES into a retro-emulation powerhouse using a Raspberry Pi. As with most people during 2020, I began to rediscover old video games that I either loved to play or never got a chance to finish. I'm a Nintendo..... Listed under: [Game - Entertainment Projects]

86. 

[Network Wide Ad-Blocker With Raspberry Pi] Ads and interrupting pop-ups are extremely annoying. If you're like me you've taken steps to remove these ads by installing ad-block software and pop-up blockers. The thing is you have to do this with every device. Computers, tablets, phones, and even then, some sites require..... Listed under: [Wireless projects]

87.

[Raspberry Pi All Sky Camera] As an astrophotographer, it is good to know the sky conditions overnight. We set up our telescopes in the early evening. The telescope and its mount automate the process of taking pictures. Many images are captured while we sleep. In the morning, we want to..... Listed under: [Video - Camera - Imaging Projects]

88.

[Li-ion Boost Module for Raspberry Pi] So here's a problem that we all have sometimes while working with 3.7V Li-ion Cells. "How to boost its voltage from 3.7V to Stable 5V 2A so it could power a Raspberry Pi for example?" The Obvious answer would be to use a Boost module..... Listed under: [LED Projects]

89.

[Raspberry PI Pixel Art Animation Display] While browsing Adafruit's Thingiverse designs, one caught my attention - 32x32 Pixel Display . I always love those RGB Matrix displays, and having one just to display some pop culture images and animations, was an awesome idea. This project takes the idea from Adafruit, but uses a..... Listed under: [LED Projects]

90.

[Raspberry Pi Pico STEAM Robot: Low-Cost, Programmable Robot] Introducing the Raspberry Pi Pico STEAM Robot, a low-cost, programmable car suitable for young learners to build, program, and customize on their own! It utilizes Raspberry Pi pico at the core and is paired with simple electronics and recycled material. The movement of the car is programmable..... Listed under: [Robotics - Automation Projects]

91.

[Raspberry Picade 3D] Im a truly 90's Kid and grew up with all those Consoles from the past. Since i had some Parts laying around and wanted to build some Cool Case to run those Arcade Games from it was no question to Print it out of my..... Listed under: [Other Projects]

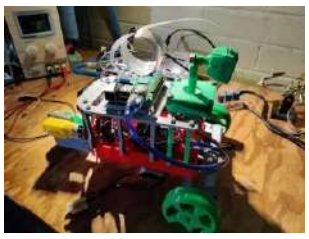
92.

[How to Make a Raspberry Pi Security Camera Under $35!] This project is an effective way of getting a security camera up and running that you can view over the network and also have it motion activated. With all the Security cameras you can buy, you can make one for more than half the price!..... Listed under: [Security - Safety Projects]

93.

[Lego Technic Rubik's Cube Machine] In 2019 LEGO introduced the Powered Up system with which their Technic models can be controlled with an app. With which the associated Technic Hubs are controlled by Bluetooth. As a result, each LEGO Technic model can be controlled in it's own unique way. The..... Listed under: [Game - Entertainment Projects]

94. [Easier Data Collection With Customizable Pi-Based Robot] The first task in an AI based project is data collection. This is often a grueling process where you have to label massive datasets by hand. This is very tiring to do manually and so EDCR(Easier Data Collection Robot) was born. This raspberry pi robot..... Listed under: [Robotics - Automation Projects]



95.

[Remote Control of Raspberry Pi Via SMS (RPi SMS Shell)] The idea of this project is to move the whole Raspberry terminal to the world of SMS communication. This is a very good application in case there is no 5G/4G/3G coverage - but only GSM coverage for phone calls and SMSs. Even better, it is..... Listed under: [Other Projects]

96.

[The Simpsons TV – 3.5" Screen Version] I discovered the "Build A Simpsons TV" article in the Volume 79 issue of Make: magazine. The article is by Brandon Withrow and he did an excellent job documenting the build process in the article and on a dedicated web site: www.withrow.io/simpsons-tv-build-guide. As I embarked building my own..... Listed under: [LED Projects]

97.

[DIY Switchbot to Control Garage Door Via Smartphone] I live in an apartment complex with an individual carport that can only be accessed from the outside. This meant that I needed to carry the bulky garage remote every time I go out. Carrying this thing was a hassle. If I am not wearing..... Listed under: [Phone Projects]

98. Google Assistant

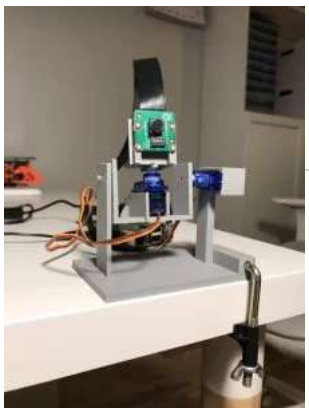
[Google Assistant on a Raspberry Pi!] Have an old Raspberry Pi sitting around? Then it's time to put it to work! In this project, I will be telling you how to make a google assistant using a Raspberry Pi! Supplies Any Raspberry Pi (Faster is better) Micro sd card Usb Microphone..... Listed under: [Other Projects]

99.

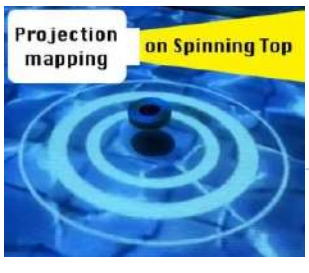
[HomeKit Enabled Smart Power Strip and HomeKit Hub!] I made a power strip that has 4 independently switchable outlets from a raspberry pi and other materials that I mostly had sitting around. The raspberry pi is running Homebridge which turns it into a hub for Apple's HomeKit. This allows you to make the..... Listed under: [Temperature Measurement Projects]

100.

[Making Tiny Apple Pi: Mini VMac for Raspberry Pi Zero] Well, I recently learned about the existence of Tiny Mac. (It's late) I was inspired by cgenco and John's web pages. Thank you for creating such a Tiny Mac. Yes, I started wanting a Tiny Mac. So, I got Raspberry Pi immediately and started preparations. I changed my..... Listed under: [Other Projects]

101. 

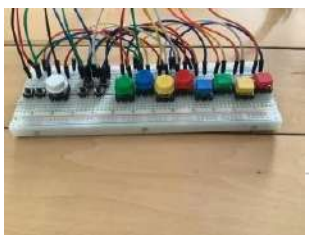
[Web Controlled Camera Turret] In this instructable I will walk you through the steps on how to make a a servo-driven turret with a raspberry pi camera module, which you control over the web. Use it to spy on your cat or keep an eye on the kettle when..... Listed under: [Video - Camera - Imaging Projects]

102. 

[Projection-mapping on Spinning Top] A spinning top with a string is a traditional toy in Japan that is popular among children. My daughter started practicing spinning tops at the nursery school. I came up with an idea to add new feature to this top. If the effect is projected..... Listed under: [LED Projects]

103. [Turn Your Raspberry Pi Into a Fully Customizable Smart Home!] Why buy an Alexa smart home device when you can build one yourself? Raspberry Pi Smart Home is just that. At its heart is a virtual assistant. built with one of the world's largest AI Models. This model not only has the ability to understand..... Listed

under: Other Projects

104. 

How to Make a Custom Retro Gaming Controller Whether you can't afford a USB controller, or you just want the the challenge, making your own retro game controller is a great idea! This controller will use the GPIO pins on the Raspberry Pi, so you will need some experience working with electronics. Otherwise,..... Listed under: Game - Entertainment Projects

105.

Raspberry Pi Smart Mirror Here's how to build a smart mirror using Raspberry Pi and the MagicMirror2 software ecosystem. It shows me the weather, the time, my calendar, and any of the other hundred available open-source modules. My mirror also has built-in LED strip vanity lighting. Supplies For this..... Listed under: Other Projects

106.

PALPi Lite Edition So this is the PALPi V4 which is a DIY Retro Game Console powered by a Raspberry Pi Zero W. The IDEA here was to make a portable handheld gaming console that can run RETRO Games like Contra, Pokemon, Super Mario ETC. For Display, I've..... Listed under: Game - Entertainment Projects

107.

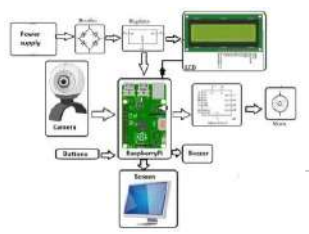
Glowing RGB LED Magic Cube (WS2812) I fully designed from scratch every single piece of this project to create a cool glowing Magic LED Cube, mainly made for light animation and basically could be explored for decoration of Electronics Labs. Designed around the awesome RP2040 Microcontroller and Built with a full of electronics passion..... Listed under: LED Projects

108.

Raspberry Pi Retro Arcade Machine Introduction Hello everyone, and welcome to this tutorial on how to create your own retro-gaming machine using Raspberry pi. This tutorial will teach you how to install RetroPie on a Raspberry Pi. I want to state I will focus on the Raspberry Pi 3 Model..... Listed under: Game - Entertainment Projects

109. Build a button-driven video player using a Raspberry Pi In this guide, I'll cover how to build a dedicated video player built around a Raspberry Pi Zero – a small, low cost computer. The player uses arcade-style light up buttons to select a video and indicate what's currently playing. This could be useful for..... Listed under: Video - Camera - Imaging Projects

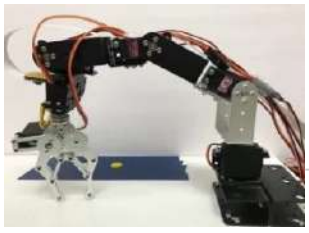
110. LED Panel Weather App Project Overview I bought a 32x64 RGB LED Panel in May of 2018 just for the hell of it. No real plan or application. I tend to go on buying binges for electronics periodically. I think I might have powered it up with some Arduino code..... Listed under: LED Projects

111. 

Facial Recognition for Car Security System using raspberry pi I. Summary The project is to build a facial recognition for Car Security System using the raspberry pi. This project offers additional advanced security features for new generation vehicles such as tesla. The raspberry pi will act as a command module for the proposed advanced..... Listed under: Security - Safety Projects

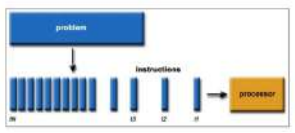
112. RASPBERRY PI WIFI ACCESS POINT I have an old iPad which has been dropped so many times that a piece of wire fell out the side, and I think that wire was the WiFi antenna. The iPad can only connect to WiFi when it's close to the access point or..... Listed under: Wifi / WLan Projects

113. Learning Physical Computing with Raspberry Pi for the Absolute Beginner Introduction to Physical Computing 1 Introduction With over ten million units sold, the Raspberry Pi single board computer has become one of the most popular ways to learn computer science. Raspberry Pi s are ultra-low-cost, fully functional tiny computers. While there are many models of..... Listed under: Raspberry Programmer Projects

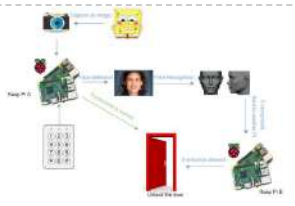
114. 

[6-DoF Collaborative Manipulator Robot for Assistance in Surgery](#) Abstract: The aim of this project was to develop a prototype of a collaborative robotic system that can assist doctors during surgeries (or medical procedures). The purpose of this system was that it would eliminate the need for a medical assistant (or a nurse) to..... Listed under: [Robotics - Automation Projects](#)

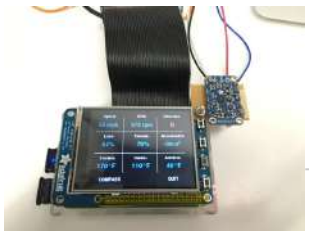
115. [Raspberry Plex](#) I've been running Plex on a Synology NAS for the last year, with a Google Chromecast handling display. It's worked well enough, but my DS 216 struggles at times to keep up with the movie (I'm not transcoding; that would never work). I decided to get into..... Listed under: [Game - Entertainment Projects](#)

116. 

[Raspberry Pi Cluster for Parallel and Distributed Computing](#) Abstract Parallel and distributed computing have become an essential part of the 'Big Data' processing and analysis, especially for geophysical applications. The main goal of this project was to build a 4-node distributed computing cluster system using the Raspberry Pi single-board computers for educational and..... Listed under: [Other Projects](#)

117. 

[FACE RECOGNITION DOOR LOCK](#) Introduction House security matters and people always try to make life easier at the same time. That's why we put up with our project, Face Recognition Door Lock System. We developed this system based on Raspberry-pi 3, to make the house only accessible when your..... Listed under: [Security - Safety Projects](#)

118. 

[Raspberry Pi Car HUD](#) The goal of our project is to use the Raspberry Pi and create a touchscreen enabled Heads Up Display (HUD) for an automobile. The HUD would display useful, real time information through an easy-to-ready GUI onto a PiTFT screen. Some example information includes the automobile's..... Listed under: [Car Projects](#)

119.

[Featured Technology: Raspberry Pi](#) Raspberry Pi is a miniature computer that can be programmed to operate other devices and interact with sensors to deliver information. The Raspberry Pi v3 runs a fully functional operating system called Raspian and has built in USB and HDMI ports to connect with monitors..... Listed under: [Other Projects](#)

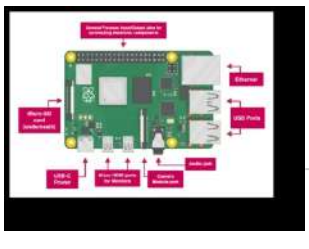
120. [A Slice of Raspberry Pi](#) Not a dessert, or a bad math pun, Raspberry Pi is one of many the many single board computers available on the market today. The device was created by the Raspberry Pi Foundation – a UK based charity founded in 2009 and dedicated to promoting..... Listed under: [Other Projects](#)

121.

[Rotating Platform based on Raspberry pi](#) Preface: This project is inspired by the pan-tilt camera platform. Some components of the project is from an open-source project on this website http://spin.media.mit.edu/build The reason that I started this project is I found it is necessary to build a platform that can rotate freely controlled..... Listed under: [Video - Camera - Imaging Projects](#)

122.

[Raspberry Pi: An Effective Vehicle in Teaching the Internet of Things in Computer Science and Engineering](#) Abstract: The Raspberry Pi is being increasingly adopted as a suitable platform in both researchand applications of the Internet of Things (IoT). This study presents a novel project-based teachingand learning approach devised in an Internet of Things course for undergraduate students in thecomputer science major,..... Listed under: [Internet - Ethernet - LAN Projects](#)

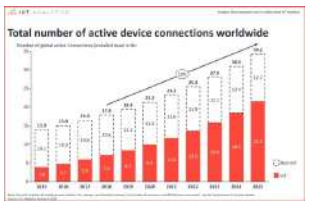
123. 

[RAD Workshop](#) Objective The objective of this workshop is to explore the capabilities of a Raspberry Pi, utilize computer vision to detect objects by color, and integrate servo motor control with the color detection output. Overview Raspberry Pi A Raspberry Pi is a single-board, small computer that..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

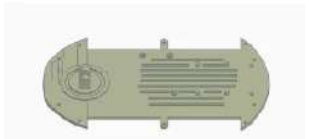
124. [Raspberry Pi projects to facilitate research](#) Collecting environmental data and monitoring your research projects can require lots of resources. Growing conditions in greenhouses, chambers, and any other controlled environment, vary from outdoor climates and that variation needs to be accounted for in research. This is often accomplished with sensors for temperature,..... Listed under: [Security - Safety Projects](#)

125.

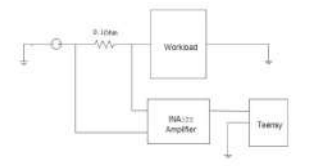
[Notice Board for receiving messages on Oled display using embedded device and IoT](#) A notice board is made with help of Oled connected to a Raspberry Pi. This project will be divided into two parts. In the first part, there will be a website where a user can type the message to be sent on the Notice Board..... Listed under: [Other Projects](#)

126. 

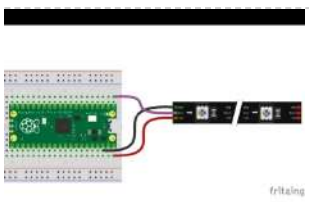
[Honeyhive – A Network Intrusion Detection System Framework Utilizing Distributed Internet of Things Honeypot Sensors](#) I. Introduction 1.1 Background With the ever increasing number of Internet-connected devices, the importance of cyber security similarly increases. Exploding over the past decade, the number of Internet of Things (IoT) devices connected to the Internet jumped from 3.8 billion in 2015 to 17.8 billion..... Listed under: [Wireless projects](#)

127. 

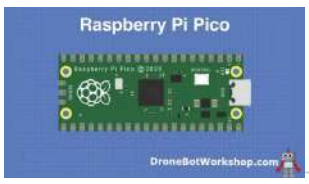
[Autonomous Vehicle Research Project](#) 1. Abstract The idea of a self-driving car is one which is actively studied and tested for use on the road.In addition, the machine learning tools required to create such a vehicle has become more and moreavailable to the public as time goes on. With..... Listed under: [Car Projects](#)

128. 

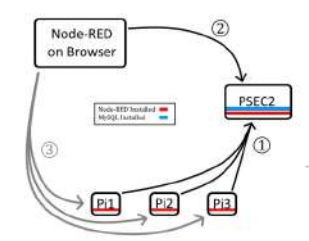
[Detailed Power Measurement with Arm Embedded Boards](#) INTRODUCTION AND MOTIVATION In the design of modern electronic equipment, energy and power consumptionhave become increasingly important. In order to design better products, engineersneed to understand the power behavior of previous products, which they can use toroughly estimate the performance of new products and future..... Listed under: [Other Projects](#)

129. 

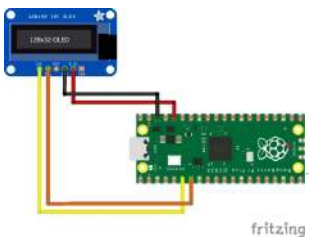
[Raspberry pi pico Program Structure – CircuitPython](#) The examples in this section illustrate several common approaches to structuring whole programs in CircuitPython. These are abstracted templates which will apply to any compatible microcontroller. These examples explore the tradeoffs which emerge when designing the control flow of the entire program. Embedded microcontroller programs..... Listed under: [Raspberry Programmer Projects](#)

130. 

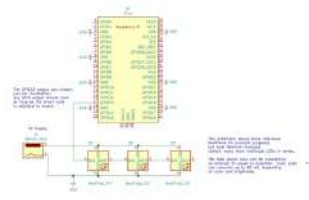
[Raspberry Pi Pico Numerical Examples](#) The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These use only the onboard hardware and the serial console. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The text can be..... Listed under: [Raspberry Programmer Projects](#)

131. 

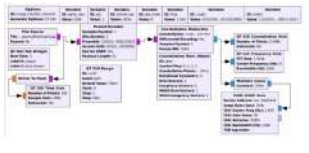
[Node-RED.](#) 1 Introduction This documentation catalogs the progress made so far in the installation of the Node-Red development tool used for data collection and analysis of Margherita 1 & 2. Not all methods and tools listed are used in the the current finished product, but were..... Listed under: [Other Projects](#)

132. 

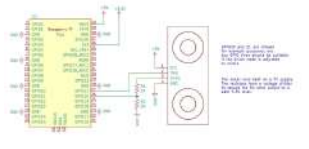
[Raspberry Pi Pico I2C Examples](#) The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more I2C (or I2C) devices are externally attached. The I2C bus is a two-wire bidirectional serial bus for short-distance low-bandwidth communication between a microcontroller and peripherals..... Listed under: [LED Projects](#)

133. 

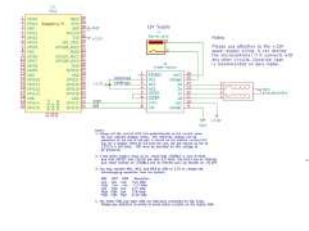
[Raspberry Pi Pico NeoPixel LED Examples](#) The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more binary input or output circuits are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The..... Listed under: [LED Projects](#)

134. 

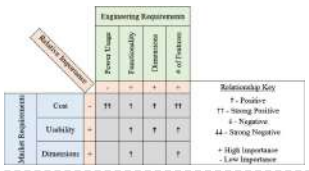
[The User Manual](#) Introduction We strongly wish our product will help you. The main requirements from our clients aredetecting the fire and transmitting the images/videos to the ground station wirelessly. Moreover,these two parts should be real-time.We are pleased that you have chosen Wildfire Drone for your business needs..... Listed under: [Wireless projects](#)

135. 

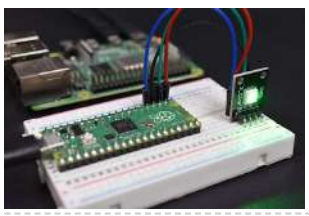
[Raspberry Pi Pico Ultrasonic Ranger Examples](#) The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more binary input or output circuits are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The..... Listed under: [Other Projects](#)

136. 

[Raspberry Pi Pico Stepper Motor Examples](#) The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more binary input or output circuits are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The..... Listed under: [Motor Projects](#)

137. 

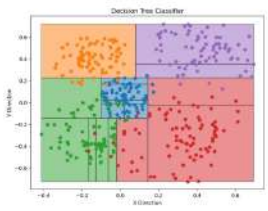
UCF Senior Design Smart Mirror 1 Executive Summary The document at hand describes the motivation, research, design and prototypingcompleted for the Senior Design 1 Semester at the University of Central Florida. Thefollowing will go into very detailed and rigorous amounts of information concerning thedevelopment of the Smart Mirror project of..... Listed under: LED Projects

138. 

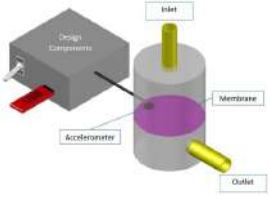
Raspberry Pi Pico Music and Rhythm Examples – CircuitPython The following short CircuitPython programs demonstrate rhythm and music generation. These are largely platform-neutral. Metronome Example This example demonstrates the essential elements of creating a pattern of movement over time within an event-loop programming structure. Direct download: metronome.py. # metronome.py # Raspberry Pi Pico - demonstrate..... Listed under: Sound - Audio Projects

139.

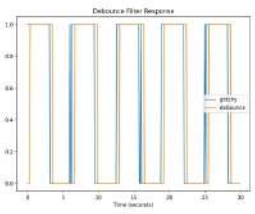
Raspberry pi Pico Remote Connection Examples – CircuitPython The following short CircuitPython programs will demonstrate communication via the host serial port. This interface can be used for local debugging as a user console, and also enable linking projects across the network. The network connection uses a Python program running on a laptop or..... Listed under: Other Projects

140. 

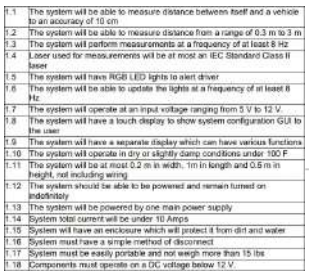
Raspberry Pi Pico Decision Tree Classifier This sketch demonstrates an example of accelerometer data processing using a classification tree. The classifier code was generated using the Python script classifier_gen.py using recorded and labeled training data. The underlying classification tree was automatically generated using the Python scikit-learn library. The purpose of the classifier is to categorize..... Listed under: Other Projects

141. 

Design, Fabrication, and Testing of a Piezoelectric Membrane Filter System Problem Statement 1.1 Requirements and Specifications Due to the system being a completely new idea, specific requirements were not provided. It was decidedthat the following values should suffice for an efficient system. The group will strive to meet all of thefollowing quantified expectations:● Objective/Purpose: The..... Listed under: Other Projects

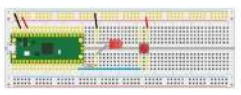
142. 

Raspberry pi pico Signal Processing Examples – CircuitPython N.B. this is new and still being tested. The following Python samples demonstrate several single-channel filters for processing sensor data. The filter functions are purely numeric operations and should work on any Python or CircuitPython system. This supports offline testing, as they can be debugged..... Listed under: Wireless projects

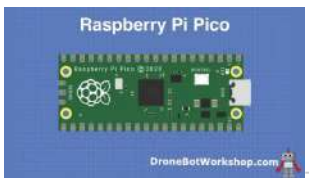
143. 

1.1	The system will be able to measure distance between itself and a vehicle to an accuracy of 10 cm
1.2	The system will be able to measure distance from a range of 0.3 m to 3 m
1.3	The system will perform measurements at a frequency of at least 8 Hz
1.4	Laser used for measurements will be at most an IEC Standard Class II laser
1.5	The system will have RGB LED lights to alert driver
1.6	The system will be able to update the lights at a frequency of at least 8 Hz
1.7	The system will operate at an input voltage ranging from 5 V to 12 V.
1.8	The system will have a touch display to show system configuration GUI to the user
1.9	The system will have a separate display which can have various functions
1.10	The system will operate in dry or slightly damp conditions under 100 F
1.11	The system will be at most 0.2 m in width, 1m in length and 0.5 m in height, not including wiring
1.12	The system should be able to be powered and remain turned on indefinitely
1.13	The system will be powered by one main power supply
1.14	System total current will be under 10 Amps
1.15	System will have an enclosure which will protect it from dirt and water
1.16	System must have a simple method of disconnect
1.17	System must be easily portable and not weigh more than 15 lbs
1.18	Components must operate on a DC voltage below 12 V.

Smart Garage Parking Aid (Smart GPA) 1 Executive Summary Ever since the 19th century, driving an automobile has been one of the mainmeans of transportation. After several inventions from different people (Karl Benz,Henry Ford,etc.) the use of automobiles of all different sorts was increased greatlywhich in turn came with some problems.Some..... Listed under: Car Projects

144. 

Raspberry Pi Pico Digital Input/Output Examples The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more binary input or output circuits are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The..... Listed under: Other Projects

145. 

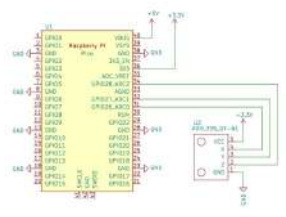
Raspberry Pi Pico Hobby Servo Examples The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more hobby servo actuators are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The text can..... Listed under: Other Projects

146.

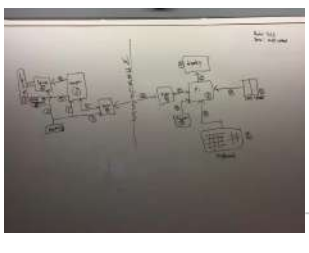
Automated Frame Spacer/Pin Removal Acknowledgement The IPFW General Motors senior design team would like to give special thanks to Dr. Zhuming Bi,and Yanfei Liu for their guidance throughout the build process. Their input was instrumental inproviding us with the right tools to make thorough design choices. We would like..... Listed under: Other Projects

147.

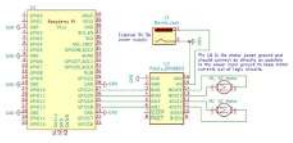
Raspberry Pi Pico Introductory Examples The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These use only the onboard hardware and the serial console. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The text can be..... Listed under: Raspberry Programmer Projects

148. 

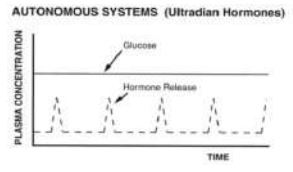
Raspberry pi pico analog Input/Output Example The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or more analog input circuits are externally attached to an ADC input. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the..... Listed under: Game - Entertainment Projects

149. 

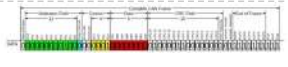
WiFi Connected Locker Access System Problem Statement Senior Design teams at Iowa State store their projects in the Senior Design lab in lockerssecured by padlocks. These locks are reused semester after semester and previous studentsmay remember their locker combination for the sake of tampering with current student'sprojects. Additionally, administrators have..... Listed under: Security - Safety Projects

150. 

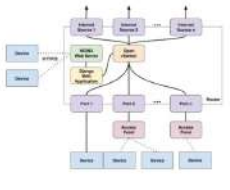
Raspberry pi pico dc motor controller The following short Python programs will demonstrate essential operation of the Raspberry Pi Pico board. These assume one or DC motor actuators are externally attached. Each can be run by copying the program into code.py on the CIRCUITPY drive offered by the board. The text can be..... Listed under: Motor Projects

151. 

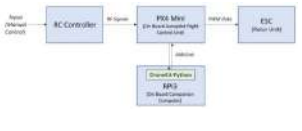
Nanoclay Crosslinked pH-Sensitive Hydrogel for Rhythmic Hormone Delivery 1.1 General Introduction Numerous endogenous hormones are known to be secreted in a pulsatile manner. Forexample, a neuroendocrine network controls reproduction and sexual development inmammals, where the release of hormones is not constant with time. An importantreproductive hormone in human puberty and reproduction, gonadotropin releasinghormone..... Listed under: Other Projects

152. 

Komatsu Sponsored – Performance of an ECU CAN Network With and Without On-The-Fly Data Encryption I. Introduction In the automotive industry, ECUs are used to control and monitor electrical systems in vehiclesand other electronic equipment. As the complexity of automotive systems increases, the numberof required ECUs increases as well. This is because it is not uncommon for a single ECU..... Listed under: Wireless projects

153. 

ACAS: Always Connected, Always Secure Introduction 1.1 Motivation Safety is paramount, and there is no place where safety is more important than in the home. According to a 2017 crime statistics study conducted by the Federal Bureau of Investigation (FBI), there is a home burglary every 22.6 seconds in the..... Listed under: Wireless projects

154. 

An Approach to Semi-Autonomous Indoor Drone System: Software Architectur and Integration Testing INTRODUCTION An Unmanned Aerial Vehicle (UAV), commonly known as a drone, is an aircraft withouta human pilot aboard. UAVs are a component of an unmanned aircraft system (UAS); which alsoincludes a ground-based controller and a system of communications between the two (Watts et al.,2012). The..... Listed under: Other Projects

155.

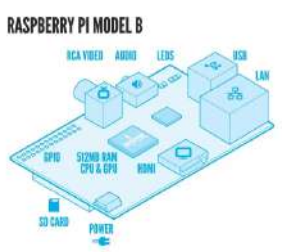
Real-Time DNN Inferencing In this lab, you will learn how to load a Deep Neural Network (DNN) model and performinferencing operations on the Raspberry Pi 4. (Note that much of this lab is derived from the DeepPicar project, shown in the pictures above. Ifyou want to know more..... Listed under: Other Projects

156.

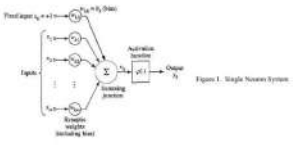
Setting up the Raspberry Pi Pico for C/C++ Development on Windows Documentation Everything in this file comes from the Getting started with Raspberry Pi Pico for C/C++ development guide. This file contains all of the same content, just organized into an enumerated list. Getting everything installed Install the ARM GCC compiler.During installation, make sure to tick the box..... Listed under: Development Board - Kits Projects

157.

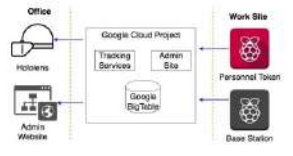
Wireless Modular Testbed Section I. Introduction Dr. Vigil-Haye's problem is the lack of hardware to demonstrate networking architectures. Dr.Vigil-Hayes desired the creation of a modular wireless testbed that can be used to representdifferent and unique network architectures for her teachings. Each device would allow for anarray of antennas..... Listed under: Wireless projects

158. 

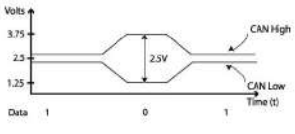
Digital Design and Computer Architecture Introduction In this lab, you will learn to program an ARM processor on the Raspberry Pi in C by following atutorial and then writing several of your own programs.At this point in your education, you have likely written a fair amount of code. Writing C..... Listed under: Other Projects

159. 

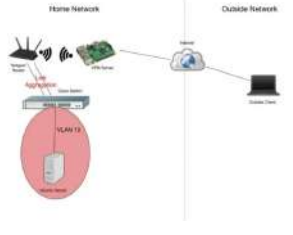
EMG-Based Human Machine Interface System 1. BACKGROUND 1.1. Related Work In 2015, Harvard designed an assisted motion glove to give grip strength and lifting support tohumans with hand impairments. [1]The soft glove design is made to be wearable and lightweightfor the user. The glove would detect weak EMG specific signal..... Listed under: Wireless projects

160. 

Eagleye: Integration of Personnel Tracking in an Augmented Reality Environment Introduction Problem Statement There are inherently a lot of problems with not knowing where people are located at. Whetherthey are in the location they say they are, or if they are missing and others are trying to find them.When workers cannot be located, there are..... Listed under: Security - Safety Projects

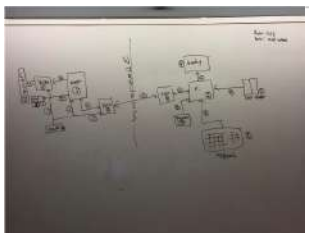
161. 

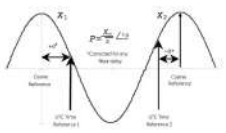
Komatsu Sponsored – ECU Communication and Networking I. Introduction The automotive industry uses an Electronic Control Unit (ECU) to control electrical systems orsubsystems in a vehicle. Networks of these units are capable of controlling and monitoring entiremachines such as those found in the construction and mining industries. As the number of ECUsin..... Listed under: Wireless projects

162. 

Budget Remote Access VPN & NAS In the modern business environment, many employees are traveling or working from home. To compensate for this, many companies offer a VPN service, where employees can access a company's private network over the internet. This offers a secure method of accessing this information through an..... Listed under: Other Projects

163. WiFi Connected Locker Access System Problem Statement Senior Design teams at Iowa State store their projects in the Senior Design lab in lockers secured by padlocks. These locks are reused semester after semester and previous students may remember their locker combination for the sake of tampering with cu t student's projects..... Listed under: Wifi / WLan Projects

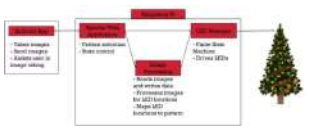


164. 

Design of an Inexpensive Residential Phasor Measurement Unit Introduction 1.1 Motivation On August 14, 2003, North America suffered its largest blackout. Major 345 kV transmission lines dropped out of service, unbeknownst to operators, causing a cascading outage that extended across the Midwest, Northeast, and into Canada [1]. An investigation launched by the North..... Listed under: Other Projects

165.

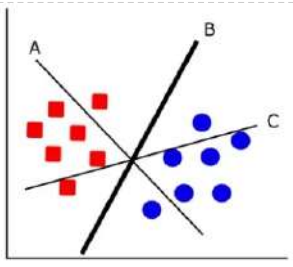
Building a Nvidia Jetson TK1 Cluster This module acts as a tutorial to help users build a cluster of Nvidia Jetson TK1 cluster for Parallel Programming and Distributed Processing. The guide is a step by step procedure to build a 6 Node TK1 cluster with a shared network file system. Note..... Listed under: Other Projects

166. 

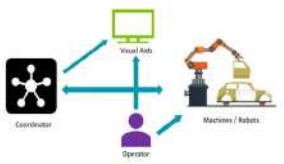
Holiday Arboreal Light Project 1 Introduction 1.1 Acknowledgement We would like to thank Dr. Thomas Daniels for the assistance in researching, developing and guiding usthroughout the two semesters we have worked with him. He has been an amazing resource as weworked through challenges on the project. We appreciate all..... Listed under: LED Projects

167.

ROObockey: Remote Controlled, Aim-Assisted Street Hockey Robot IntroductionAs technology advances, image processing is being used in numerous applications especiallywithin robotics. Examples of image processing can be found in autonomous vehicles andcommercial robots. The Robogames Competition held in San Mateo, California challengesstudents to use new technologies to design a robot hockey player capable..... Listed under: Robotics - Automation Projects

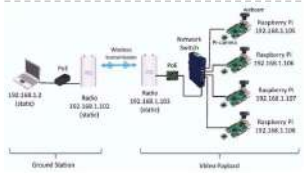
168. 

INTRODUCTION AND LITERATURE REVIEW The navigation methods currently employed by many autonomous vehicle companies such asGoogle, Uber, and Telsa rely upon manually driving roadways and gathering information aboutthe roadway infrastructure with lidar before any autonomous navigation is possible. While thismethod can be very effective, issues can arise when the..... Listed under: Other Projects

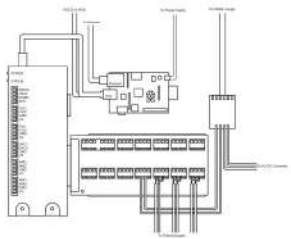
169. 

Managing Variability in Assembly Lines Introduction Manufacturing companies have different ways to meet the market demand, some companiesdeliver end products from their inventory to the customers. Other companies, instead of keepingthe finished goods inventories, they assemble or manufacture end products only after theyreceive the customer order. However, producing finished goods..... Listed under: Other Projects

170. Autonomous Quadcopter Platform Hardware Setup WARNING: Experience with flying Remotely Controlled QuadCopter is required. Binding Procedure Binding is required the first time the craft is used with a new transmitter. It is doneusing the following procedure. To place Rx into binding mode, pace a wire jumper across PCB..... Listed under: Other Projects

171. 

Implementation of Simultaneous Multi-Streaming of Live Solar Eclipse Video via 5.8 GHz AirMax I. Introduction FOR the 2017 solar eclipse ballooning, the live streaming of the videos capturing the shadows of the solar eclipse was one of the main objectives. All teams who participated in the 2017 solar eclipse ballooning project were initially provided with a baseline ballooning..... Listed under: Solar energy projects

172. 

MCP Scrubber Monitoring 1 Introduction The scrubber is a device that bombards microchannel plates (MCP's) with electrons, thus"scrubbing" them. This is done both to stabilize the gain of the MCPs and to, as the namewould suggest, clean them of any residue. As detailed by Tyler Lutz in his..... Listed under: Other Projects

173.

Design and Development of a Low-Cost Inspection Robot 1. Introduction Our nation's infrastructure is aging and deteriorating rapidly. Currently there is no mechanism to thoroughly inspect the condition of our bridges, waste tanks, pipelines, and reactors. Many of these structures have reached the end of their design life and need to be inspected..... Listed under: Robotics - Automation Projects

174.

Smart House 1 Introduction For the process of designing the Smart Home system, there are a few key steps covered in this report. First, the problem statement for this project is defined, which includes defining the boundary of the system, the interfaces needed between the system and..... Listed under: Home Automation Projects

175.

Learn to use the Linux command line, C++, and Python Things you need to knowTwo Flavors/Distros we will be using. CentOS release 6.4 (Final) on Taz.harding.eduRaspbian 3.10.25 - a modification of DebianCommand line programs ls or ls cp – copy a file to another location mv – rename a file cd – change directory/folder mkdir..... Listed under: Raspberry Programmer Projects

176.

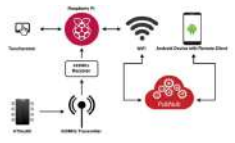
[Pi3: Getting BLE Up and Running](#) Raspberry Pi running Wheezy (Debian 7) There's a few different way to figure out what distribution you have. You can do:$lsb_release -aor$cat /proc/version (didn't work for me)or$cat /etc/*-releaseI'm sure there are other ways. Here are the results for all 3: (Note: I tried getting this..... Listed under: Other Projects

177.

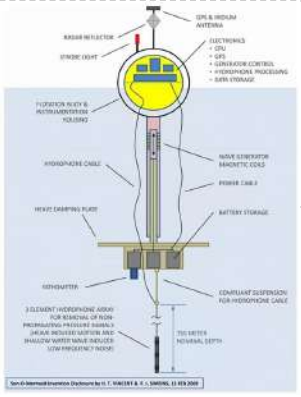
[Live RSSI Mapping System](#) 1 Introduction As our connection to the internet becomes increasingly important and as new forms of dispens- ing internet services emerge, it is important to identify weak-spots in any internet network. We propose developing Raspberry Pi devices which will continuously monitor the strength of a WiFi..... Listed under: Other Projects

178.

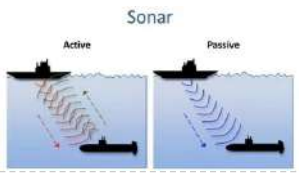
[A Novel System To Improve Over-Speeding Traffic Violation Ticketing using a Black Box](#) Introduction 'Every once in a while, a new technology, an old problem and a big idea turn in to innovation.' - Dean Kamen National Highway Traffic and Safety Administration or more commonly known as NHTSA is a federal agency of the US state government. The..... Listed under: Other Projects

179. 

[Home Alarm System With Raspberry Pi](#) 1.1 Introduction This project will be a home alarm system. It will be made using a Raspberry Pi, an RF receiver, some RF transmitters. The primary purpose will be to alert the homeowners with some kind of sound and maybe push notifications to registered Android..... Listed under: Clock - Timer Projects, Feature

180. 

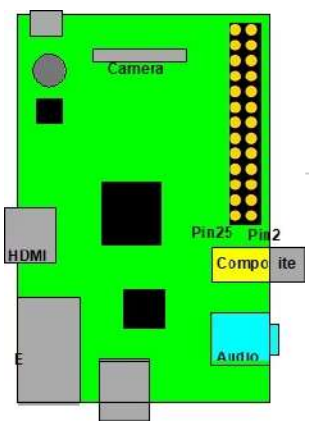
[DATA COLLECTION AND TELEMETRY SYSTEM DESIGN FOR MARINE INSTRUMENTATION: THE SON-O-MERMAID](#) 1 INTRODUCTION Son-O-MERMAID is a concept that evolved from MERMAID [1], a floating instrument that acts as a freely drifting seismometer equipped with a hydrophone that captures acoustic signals caused by distant seismic activity. MERMAID is equipped with sensitive on-board acoustics, a battery life measured in..... Listed under: Other Projects

181. 

[Underwater 3D Data Collection](#) 1.0 Introduction: How can you call this planet earth, when it is quite clearly water? On average, 1,582 shipping containers of cargo have been lost at sea each year over the past nine years (World Shipping Council, 2017). These lost containers, however, only make-up a..... Listed under: Other Projects

182.

[Board-to-Board Communication](#) In this lab, you will establish UART based communication channels between the Pi 4 and the HiFive 1 boards. Part 0: Setup the UART connections (for TAs) In this part, we will connect the HiFive1 and the Raspberry Pi 4 boards via two UART channels..... Listed under: Development Board - Kits Projects

183. 

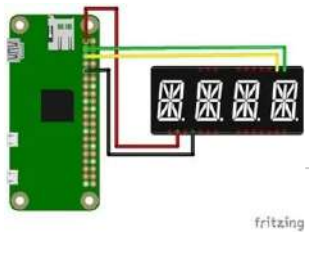
[Homework 4: Linux GPIO Interface](#) Use your Raspberry-Pi to work on this project. You will need a breadboard, an LED, some resistors, and some wire for this homework. In class I handed out some female/male hookup wires for connecting the Pi to the breadboard. You should source the remaining parts..... Listed under: Other Projects

184.

[WEARHOUSE DISTRIBUTION](#) 1. INTRODUCTION With the advent of e-commerce, the demand for products has increased and the companies need large inventory and require handling large volumes on a daily basis. This includes a lot of labor- intensive tasks like storing, moving, scanning, inspecting, delivering, and many more..... Listed under: Robotics - Automation Projects

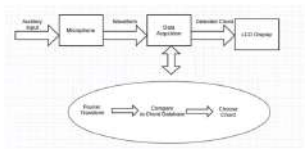
185.

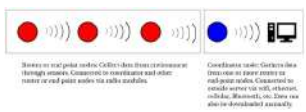
[Working with your Pi](#) You'll work on this lab individually (but it's ok to ask other students for help). In this lab, you'll set up Linux on your Pi and get some experience with command-line tools. Goals: Set up Raspbian on your Raspberry Pi 2 BLog into your Pi..... Listed under: Other Projects

186. 

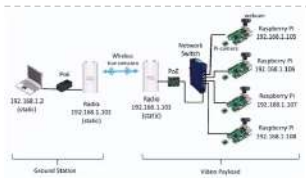
[IoT Smart Alarm Clock](#) I. Summary The smart alarm clock is an open-source project about building and programming an Internet of Things alarm clock. The following project provides all information you need to build the smart alarm clock. The IoT Smart Alarm Clock has text to speech synthesizer, three ways..... Listed under: Clock - Timer Projects

187. [Stand-Alone Device for Chord Detection](#) 1. Introduction Ever since I started playing the violin when I was three years old, both listening to and playing music has been one of my strongest passions. The study of music theory is something that I have pursued since senior year of high school,..... Listed under: Other Projects



188. 

[Creating a mesh sensor network using Raspberry Pi and XBee radio modules](#) Introduction We live in uncertain times. The list of environmental problems seems to grow, while the solutions feel increasingly out of reach. But daunting as it may be, it is imperative that we address these issues. The earth is, in the words of Carl Sagan,..... Listed under: [Radio Projects](#)

189. 

[Implementation of Simultaneous Multi-Streaming of Live Solar Eclipse Video via 5.8 GHz AirMax](#) I. Introduction OR the 2017 solar eclipse ballooning, the live streaming of the videos capturing the shadows of the solar eclipse was one of the main objectives. All teams who participated in the 2017 solar eclipse ballooning project were initially provided with a baseline ballooning..... Listed under: [Solar energy projects](#)

190.

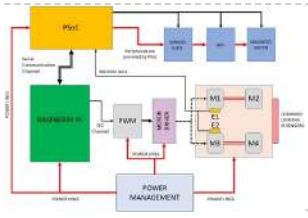
[Raspberry Pi Enterprise Network WiFi Bridge](#) The goal of this project is to allow an IoT device, such as a Weemo Smart Plug, Amazon Echo, Gaming Console, or any other Wi-Fi enabled device to connect to a WPA_EAP Enterprise Network by using a Raspberry Pi Zero W as a packet forwarding..... Listed under: [Internet - Ethernet - LAN Projects](#)

191.

[Design of Remote Datalogger Connection and Live Data Tweeting System](#) I. INTRODUCTION Global average temperatures have increased alongside increases in population and consumption. These changes pose serious threats to the current standard of living as weather events become less predictable and more intense (Westra et. al., 2014). Along with this trend, increases in population are accompanied..... Listed under: [Other Projects](#)

192.

[Real-time Transmission of Voice over 802.11 Wireless Networks Using Raspberry Pi](#) INTRODUCTION In the recent years, proliferation of technologies like WiMAX , IEEE 802.11, 3G and Bluetooth has directed much attention to wireless audio streaming. Nowadays audio streaming via radio waves and Bluetooth has particularly gained momentum. But these technologies have limitations such as, the destination..... Listed under: [Wireless projects](#)

193. 

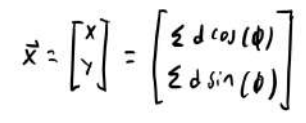
[DESIGN OF AN UNMANNED GROUND VEHICLE CAPABLE OF AUTONOMOUS NAVIGATION](#) ABSTRACT This project is a multidisciplinary initiative with an objective to develop a scalable robotic platform of ground and aerial robotic swarms that are capable of tracking an object in an unknown environment. Conventionally, most robotic platforms perform tasks independently and are not designed to..... Listed under: [Other Projects](#)

194.

[RASPBERRY PI ARCADE STATION](#) The goal of this project was to construct a standalone table-top arcade station using the Raspberry Pi. Our inspiration for this project came from our mutual fondness for classic video games and interest in using the versatile capabilities of the Linux operating system on the..... Listed under: [Game - Entertainment Projects](#)

195.

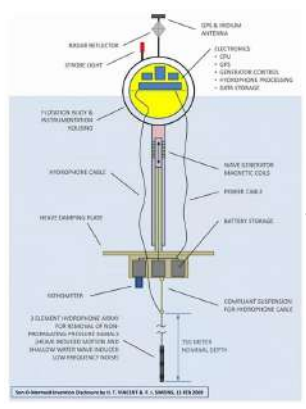
[ECE5725 RPi Based AR Game](#) Introduction We developed an AR game based on RPi in our project. In this game, player can control a robot through WiFi to explore the environment around it. There would be some monsters and other items for player to find. Player can fight with monsters..... Listed under: [Game - Entertainment Projects](#)

196. 

[PiFi SLAM](#) Objective Our goal was to solve the simultaneous localization and mapping (SLAM) problem by using WiFi measurements. Specifically we wanted to implement this paper, where they solved SLAM through a Graph SLAM formulation with WiFi signal strength and movement data from an IMU. Due to the constraints..... Listed under: [Wifi / WLan Projects](#)

197.

[REMOTE CONTROL DEVICES USING MICROCONTROLLERS](#) 1. INTRODUCTION The Raspberry Pi is a credit-card-sized computer that allows to let the computer machine apart and develop infinity of possibilities. Raspberry Pi is going to be used in this project in order to control some electronical devices to build a remote control vehicle..... Listed under: [Other Projects](#)

198. 

[DATA COLLECTION AND TELEMETRY SYSTEM DESIGN FOR MARINE INSTRUMENTATION: THE SON-O-MERMAID](#) 1 INTRODUCTION Son-O-MERMAID is a concept that evolved from MERMAID [1], a floating instrument that acts as a freely drifting seismometer equipped with a hydrophone that captures acoustic signals caused by distant seismic activity. MERMAID is equipped with sensitive on-board acoustics, a battery life measured in..... Listed under: [Other Projects](#)

199.

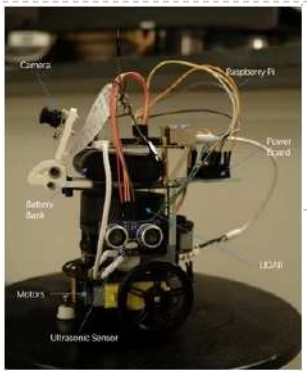
Smart Door System based on raspberry pi Introduction The following subsections have an overview, motivation, importance, objective, problem analysis, list of requirement and expected results. 1.1 Overview of the project At any moment, you may have a visitor, that visitor may be a friend who has something to say or an intruder..... Listed under: Other Projects

200.

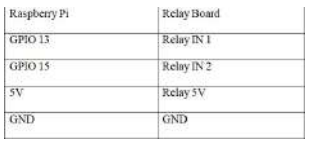
Implementation and Design of Webcam Systems for Traffic Monitoring in Acadia National Park Abstract Because traffic congestion often has impacts on safety, visitor experience, resources, emergency response times, and park operations, reducing congestion is an important management topic for Acadia National Park. This project explores the use of remote webcams to monitor parking lots and other areas of..... Listed under: Video - Camera - Imaging Projects

201.

Home Automation Based on Raspberry Pi Single Board Computer Chapter 1 : Introduction and problem statement : The following subsections have an overview, short description, problem analysis, list of requirement and objectives. 1.1 Introduction Everyone wants to know who is at his front door, Which day and at what time they came, to be..... Listed under: Home Automation Projects

202. 

Real-time Motion Planning For Autonomous Car in Multiple Situations，Under Simulated Urban Environment Advanced autonomous cars have revolutionary meaning for the automobile industry. While more and more companies have already started to build their own autonomous cars, no one has yet brought a practical autonomous car into the market. One key problem of their cars is lacking a..... Listed under: Robotics - Automation Projects

203. 

Raspberry Pi	Relay Board
GPIO 13	Relay IN 1
GPIO 15	Relay IN 2
5V	Relay 5V
GND	GND

Multi-Language Voice Control IoT Home Automation Using Google Assistant and Raspberry Pi I. Summary The purpose of this project is to build a multi-language voice control IoT home automation using Google Assistant and Raspberry Pi. This project will enable the user to control a home despite the language being used. This will be enables by using IoT..... Listed under: Home Automation Projects

204.

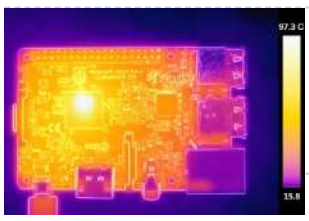
DESIGN AND IMPLEMENTATION OF HOME USE PORTABLE SMART ELECTRONICS The widespread of low cost embedded electronics makes it easier to implement the smart devices that can understand either the environment or the user behaviors [3]. The main object of this project is to design and implement home use portable smart electronics, including the portable..... Listed under: Home Automation Projects

205.

Wearable and Real-time Kinematics Estimates with OpenSense In the page, we introduce you to the open-source hardware and software that allows you to use OpenSense to analyze movements in real-time, show you how to assemble your own device, and provide information for you to customize the setup to a specific application. What..... Listed under: Other Projects

206.

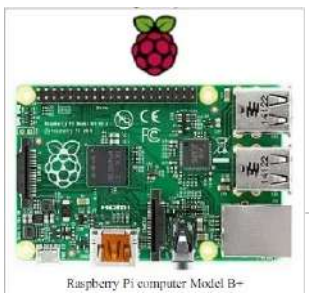
On-Board Processing for Linear Target Mapping Background/Scenario In many military applications, communications to unmanned systems are limited or prohibited and In the undersea domain, this is often the norm. Conducting submarine-launched Autonomous Underwater Vehicle (AUV) operations requires a level of autonomy for the AUV dependent on its assigned tasks, environmental conditions,..... Listed under: Other Projects

207. 

EC 521 Group 3 – Raspberry Pi 3B Security Assessment Background High-level Description This project is a security assessment on the Raspberry Pi Model 3B. We are group 3, and our group consists of four members: Joshua Bassin, Ashley Cui, Kaitlin Walsh, and Hang Xu. We have looked at multiple areas of the Raspberry Pi..... Listed under: Security - Safety Projects

208.

NAS on Raspberry Pi This article is about setting up network storage on Raspbian (follow the link to view the article on my corporate blog) 1. What is a NAS Server A (Network Attached Storage) NAS Server is a network storage system to serve and share files to other..... Listed under: Raspberry Programmer Projects

209. 

Raspberry Pi The Raspberry Pi is a credit-card-sized single-board computer developed in the UK by the Raspberry PiFoundation with the intention of promoting the teaching of basic computer science in schools.[4][5][6]The Raspberry Pi is manufactured in three board configurations through licensed manufacturing agreements with Newark element14 (Premier Farnell), RS Components and Eggman. These companies..... Listed under: Raspberry Programmer Projects

210.

Automatic Weather Satellite Image Downlink Program Introduction In the beginning of the autumn semester, we came across some videos from Youtube introducing the SDR (Software Defined Radio). We found it very interesting because it has a very broad range of frequency detections and leaves all the filtering & processing stuff to..... Listed under: Other Projects

211. WORKING WITH IOT AT BUCKNELL Customizing Raspbian Images At Bucknell we have been deploying devices built around Raspberry Pies to take on a wide range of duties including data collection duties in the field. The Raspberry Pi turns out to be a hardy device we can close in weather proof..... Listed under: Other Projects

212.

[BUILD RASPBERRY PI ROBOTS: BEST TUTORIAL FOR BEGINNERS] If you are a beginner to Raspberry Pi and were looking for a simple hardware project, then look no further. This tutorial will show you to develop a python-based robot which avoids obstacles and navigates freely. Obstacle avoiding robots are fairly common and easy to make. Here, you..... Listed under: [Robotics - Automation Projects]

213.

[Adafruit's Raspberry Pi Lesson 9. Controlling a DC Motor] Overview This lesson describes how to control both the speed and direction of a DC motor using Pythonand a L293D chip. In Lesson 8, we used the Pi to generate pulses to control the position of a servo motor. In thislesson we use pulses to control the speed of a regular DC motor and the L293D motor controlchip..... Listed under: [Motor Projects]

214.

[SECURITY CAMERA SYSTEM with HUMAN DETECTION] Introduction Our project idea is to utilize a Raspberry Pi 3 to build a webcam server that provides a platform for users to remotely monitor their homes over the internet. DropBox uploading of captured images and email notifications will be triggered if a human is..... Listed under: [Security - Safety Projects]

215.

[ECE5725 Project Sand Flow] Introduction Short description of what was done for the project. The work team has done for the sand flow system is to simulate the motion of sand to realize the sand matrix game on PiTFT screen. The piTFT screen is hand held by users so..... Listed under: [Game - Entertainment Projects]

216.

[The Remote Debugginator] The Remote Debugginator is a device created for the Acacia Irrigation Project to enable remote access to a LAN network over 3g. We have three irrigation sites serving about 20 farmers' fields. Each of these sites has a Raspberry Pi collecting data on sunlight, temperature, power consumption,..... Listed under: [Other Projects]

217.

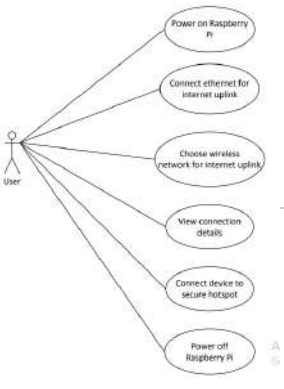
[The Integration of Sensor Data with Raspberry Pi Microprocessor] Abstract To implement various sensors on an integrated robotic system, a programming environment and valid communication methods that is capable of inputting digitized sensor data, and use those data in the control loop, is needed. Keywords: I2C communication, UART communication, Adafruit Ultimate GP Breakout, Sparkfun..... Listed under: [Sensor - Transducer - Detector Projects]

218.

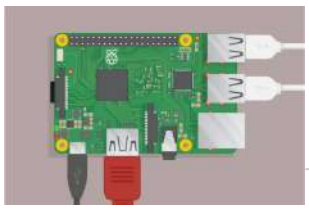
[Introducing the Raspberry Pi Zero] A Tour of the Pi Zero It's Thanksgiving 2015 - the turkey's brining, the potatos not-yet-mashed... and from Pi Towers the call goes out A NEWPI IS BORN! LONG LIVE THE PI! The Pi Zero - the smallest, thinnest, most-affordable Pi ever. So much so, it..... Listed under: [Raspberry Programmer Projects]

219.

[NSF NeTs Small RUI: Wireless Sensor Network Project] Bulldog Mote One project currently being engaged in is the development of a new wireless sensor mote tobe used by California State University, Fresno. This new mote will be a brand-new deviceusing existing and up-and-coming technologies to be used by students to further researchefficient routing..... Listed under: [Wireless projects]

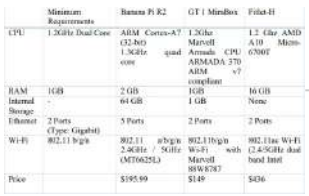
220. 

[Raspberry Pi VPN Travel Router] I. Introduction Even the basic features of consumer devices often require an internet connection as mobileoperating systems shift to cloud-hosted platforms for services like photo storage, messaging,video playback, etc. While the expansion of mobile data networks has helped to provide "alwayson" connections for these devices,..... Listed under: [Wifi / WLan Projects]

221. 

[4C: GETTING STARTED WITH THE RASPBERRY PI] When you start your Raspberry Pi for the first time, it is important that you configure the system for your context. This includes setting up your password, country, language, and time zone. In addition, for exercises in this book, this includes enabling a range of..... Listed under: [Security - Safety Projects]

222. [HOME NETWORK PROTECTOR – IOT SECURITY DEVICE] INTRODUCTION The objective of our project is to develop a Home Network Protector (HNP) that preventsagainst cyber intrusions. This will include network firewall, intrusion prevention system,and a vulnerability scanner. The HNP will operate as your home



router and monitor theinternet traffic in real-time to prevent..... Listed under: Security - Safety Projects

223.

Pet Food Monitor Using Raspberry Pi Introduction For pet owners, monitoring their food intake is one of the most important aspects of ensuring ahealthy and happy pet. Overeating has the potential of negatively affecting a pet's life, while apet refusing to eat could be a sign of something more serious that..... Listed under: Wifi / WLan Projects

224.

Raspberry Carputer Infotainment System Intro & Parts List This tutorial was designed to help you build an in-car infotainment system or carputer using a Raspberry Pi, and a few other components. The concept was something that I found when I got my first Raspberry Pi for a class, and..... Listed under: Other Projects

225.

Design Applications for Girls on Raspberry Pi Platform 1.0 Background Millions of girls in developing countries are still being denied an education. This issue isworldwide and slow education progress for girls nowadays will have a huge impact in societyover lifetime. To resolve this issue, Q8 engineering teams are concerned the girls' educationalissues, using..... Listed under: Other Projects

226.

SONBI ROBOT HUMAN DETECTION USING KINECT AND RASPBERRY PI A. OBJECTIVE To build the software system of the raspberry pi inside Sonbi andintegrate the Microsoft Kinect onto to Raspberry pi and make itinteractive with Sonbi robot in a way when people stands in front ofKinect, the Sonbi robot waves his arms to the people..... Listed under: Robotics - Automation Projects

227.

Setting Up Raspberry Pi, Camera,and iRobot Create IntroductionRaspberry Pi is a small singleboard computer with USB, WiFi, Bluetooth, Ethernet, HDMI,Audio, and GPIO connectivity. In cs424, we will be controlling an iRobot create using aRaspberry Pi 3 Model B. This particular model is the most capable compared to the othermodels. It has 4..... Listed under: Robotics - Automation Projects

228.

Raspberry Pi on UVa WiFi Network The easiest way to get your Raspberry Pi connected to the Internet at the University of Virginia is to use an Ethernet cable. If you want to use wireless, pretty much the only option is to use the hidden "wahoo" network. This is a quick..... Listed under: Wifi / WLan Projects

229.

E-mail Spam Filtering on Raspberry Pi using Machine Learning Introduction Access to internet and social media has resulted in an exponential increase of digital marketing and targeted advertising. One of the ways targeted advertising is achieved is through e-mails. Most of the times, the advertisement e-mails are unsolicited and provide no useful information to..... Listed under: Raspberry Programmer Projects

230.

Webcam Streaming Video On Raspberry Pivia Browser Compiling FFMpeg For Webcam Streaming First thing we need to do is to get a version of ffmpeg that can stream. If you haven't installedGit on your Raspberry Pi, do that first.sudo apt-get install git Once git was installed, I went into /usr/src to download the source for..... Listed under: Video - Camera - Imaging Projects

231.

Software for a button-driven Raspberry Pi video player Previously, I described how to build a dedicated video player using a Raspberry Pi Zero – a small, very cheap (~$10) computer and a set of physical buttons to switch the active video. The Pi Zero works for 1080p HD video. If you want to..... Listed under: Video - Camera - Imaging Projects

232.

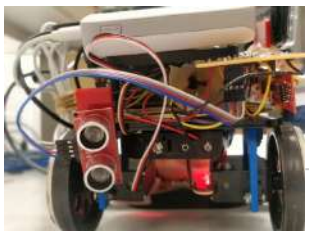
CONFIGURING HOSTAPD ON RASPBERRY PI The daemon hostapd is a Linux service which enables a "host" computer to become a WiFi Access Point (AP). Thus "host" + "AP" + "d" (for daemon) gives the name hostapd. I originally learned to set up hostapd from instructions on Pastebin written by user Dryfire117,1 andlater found..... Listed under: Wifi / WLan Projects

233.

Graphic Design Display using Raspberry Pi and Adafruit LED Workshop Overview Our workshop will introduce students to the project "Graphic Design Display using Raspberry Pi and Adafruit LED". This workshop is part of our club initiative to engage students in computer science courses through STEAM project experiences. The project is designed to incorporate technology and..... Listed under: LED Projects

234.

Precision Pointing Device IMAGE PROCESSING DETAILS The OTS MGS evolved across three main iterations. The driving system requirement of these iterations was processing all image analysis and feedback within 100ms per frame, or 10fps. First Iteration: Image processing starts with the loading of a video frame into memory..... Listed under: Other Projects

235. 

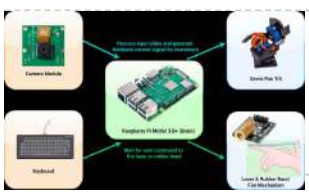
Self Parking Car Introduction We are offering a solution to the most feared part of a driver's test –Parallel Parking. Driving through the city, it is a grueling task finding a parking spot. But squeezing your car into it is a whole different ball game. Wouldn't it be..... Listed under: Car Projects

236.

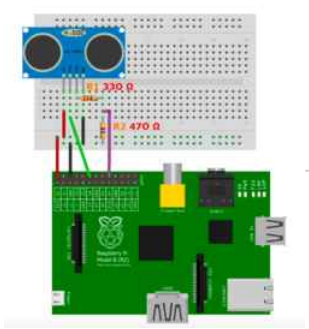
Automatic Number Plate Recognition System Introduction Our project aims to design a parking barrier modeling system with automatic number plate recognition.In our project, we used two Raspberry Pi. One for controlling the car stuck with printed number plate to move linearly toward the barrier and stop if it is not..... Listed under: Other Projects

237.

Burning Raspbian to an (micro)SD Card Flash the image Open EtcherSelect the Raspbian imageSelect the drive to which you want to burnDouble check your selectionsThis is critical, as you run the risk of overwriting the wrong drive (including your primary hard drive)Click “Flash!” and wait until Etcher writes and validates the image. This can take around 10..... Listed under: Memory - Storage Projects

238. 

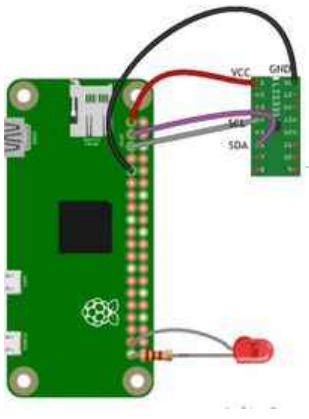
Autonomous Object Tracking Turret Project Objective For our ECE 5725 Design with Embedded Operating Systems final project, we created an autonomous object tracking turret. Our turret is able to locate blue objects in real time and autonomously track it with two degree freedom of motion (rotation and tilt). Our..... Listed under: Other Projects

239. 

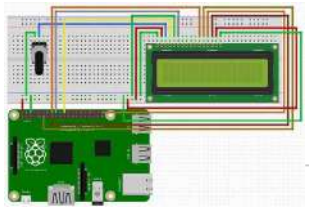
Ultrasonic Sensor (HC-SR04) + Raspberry Pi Hardware Raspberry pi 3Ultrasonic Sensor(s) - HC-SR04A set of resistors for each sensor you are connecting330Ω and 470ΩJumper wires to connect the sensor(s) to the piBreadboard to connect the sensor(s) to the pi Wire Setup Pins There are four pins (labeled) on the sensor that..... Listed under: Sensor - Transducer - Detector Projects

240.

Network Adapter in Monitoring Mode – Rasp Pi 3B Overview The Raspberry Pi 3B+ (and all other current Raspberry Pis) has built in WiFi. The "wlan0" interface is typically the default gateway of connection besides Ethernet, but it is not capable of entering "monitoring mode". In this tutorial, we will show you how to..... Listed under: Wifi / WLan Projects

241. 

Accelerometer + Pi Zero Overview This tutorial involves wiring the H3LIS331DL accelerometer to the Raspberry Pi 0, as well as implementing the code in python that executes the readings. This specific accelerometer is 3-axis, meaning it records data in the x, y, and z-planes, and can take readings up..... Listed under: Metering - Instrument Projects

242. 

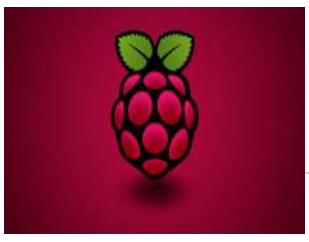
LCD display + Raspberry Pi Wire setup 1. Solder the 0.1" header strip into the 16 pins of the LCD screen's board 2. Connect the wires as shown above Pin 2 (VCC) and 6 (Ground) on raspberry pi to power and ground respectivelyOn LCD pin 1 to ground, pin 2..... Listed under: LCD Projects

243.

reTerminal Machine Learning Demos (Edge Impulse and Arm NN) 8 GB RAM 32 GB eMMC Raspberry Pi CM development board with touchscreen and plenty of interfaces. Story Last few articles I published were about TinyML with Wio Terminal - a Cortex M4F based development board with an LCD screen in sturdy plastic case. Seeed..... Listed under: Development Board - Kits Projects

244.

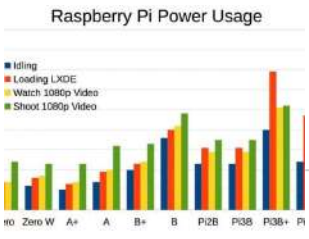
Hardware Boot Select Switch Using Pico Pre-choose the OS to boot, even before turning on the computer by toggling a switch. Now you don't have to wait to select the os. Story Wandering Hackaday.io for projects, I stumbled upon this project(click) by Stephen Holdaway. In this project, he solved a frustrating task..... Listed under: Development Board - Kits Projects

245. 

Alexa + Google Assistant On A Raspberry Pi Alexa + Google Assistant On A Raspberry Pi Steps to Build Smart Speaker: 1. To start off, you’ll first need to set up your Raspberry Pi. To do so, simply download the NOOBS package,extract it to your microSD card and plug it into your Raspberry Pi. Hook..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

246.

Teachable Machine A voice-enabled machine which reads book and replies to the questions. Introduction In this project I built a voice-enabled teachable machine which can scan text from a book pages or any text source and convert that to a context and users can ask questions related..... Listed under: CNC Machines Projects

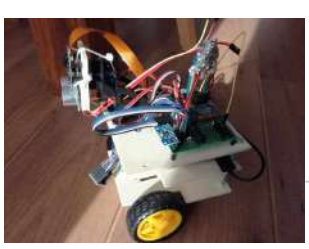
247. 

Selecting a Power Supply for Raspberry pi Problem You need to select a power supply for your Raspberry Pi. Solution see The basic electrical specification for a power supply suitable for a Raspberry Pi is that it supplies a regulated 5V DC (direct current). The amount of current that must be capable..... Listed under: Internet - Ethernet - LAN Projects

248.
[Smart Mirror Touchscreen (with Face Recognition)] Build your own Touchscreen Smart Mirror with face recognition. You can even control Spotify & Smart Home Appliances. The term Smart Mirrors could easily be dismissed as a Science Fiction fantasy. I mean, the idea of Magic Mirrors that displays useful information to the user..... Listed under: [Memory - Storage Projects]

249.
[Safety Measures: Social Distancing] A contribution to maintaining a safe distance and the health of people in the time of COVID-19 crisis. Introduction The current state of emergency due to COVID-19 has affected our world in several ways. In matter of days we have had to change the way..... Listed under: [Medical - Health based Projects]

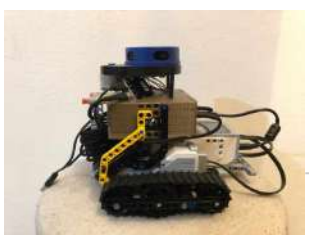
250.
[Connecting a Raspberry Pi IoT Device to the AWS Cloud] Learn how to connect your Raspberry Pi to the AWS cloud for the first time! IoT and connected device are becoming ubiquitous. Every day we work with companies all over the world who need help building everything from smarter vending machines to automotive head-up displays..... Listed under: [Raspberry Android]

251. 
[Rpibot – About Learning Robotics] This is a simple and cheap mobile robot platform designed for learning and extending. I explained my concept and also my problems I solved. I am an embedded software engineer in a German automotive company. I started this project as a learning platform for embedded..... Listed under: [Robotics - Automation Projects]

252.
[Simple Pi Robot] Simple Pi Robot aims to put robot control in simple form. https://youtu.be/kCIXRbidC90 Simple Pi Robot aims to put robot control in simple form. The part list (1) Raspberry pi (Any model) but with the recent launch of pizero or pi 2 shall be a good..... Listed under: [Robotics - Automation Projects]

253.
[Smart Control of Raspberry Pi Fan Using Python & ThingSpeak] A Python script monitors CPU temperature and controls the fan using on-off control with temperature hysteresis. Brief overview By default, the fan is directly connected to the GPIO - this implies its constant operation. Despite the relative quiet operation of the fan, its continuous operation..... Listed under: [Other Projects]

254.
[Collars & Gateways] A framework to track elephant activity over short & long term and alert potential incidents in areas of human-elephant conflict. The elephant edge challenge provides an exciting opportunity for ideas in conservation technology to be applied on the field. In this particular challenge, technology can play dual..... Listed under: [GPS Based Projects]

255. 
[Autonomous Tank] Adding a much cheaper alternative to the Carter and Kaya designs reference using a Lego EV3 set. In this project, I will document the construction of a tracked vehicle made with Lego Technic parts and motors, enhanced with LiDAR and controlled by a Jetson Nano..... Listed under: [Robotics - Automation Projects]

256.

[Changing Your Raspberry pi Password] Problem: By default, the password for a Raspberry Pi will be raspberry. Problem: By default, the password for a Raspberry Pi will be raspberry. You want to change this. Solution: You can use the raspi-config tool to change your password. Run the raspi_config utility by issuing..... Listed under: [Other Projects]

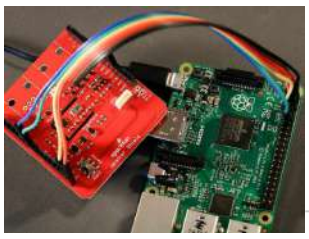
257.
[Alexa Using Raspberry Pi and Bluetooth Speaker] This Amazon Alexa which is built with Raspberry pi and Bluetooth Speaker. Description: This is Amazon Alexa which is built by using Raspberry Pi and Bluetooth Speaker. This is a step by step tutorial to build Amazon Voice Service(AVS) SDK on Raspberry Pi. Please refer to Amazon's..... Listed under: [Sound - Audio Projects]

258.
[Sonos / Spotify Vinyl Emulator] Experience the tactile nature of a vinyl music collection (but without actually owning any vinyl) through Sonos, Spotify and NFC tags Listening to music on vinyl is great. It's physical and tactile. You listen to a whole album rather than random tracks. You notice when..... Listed under: [Other Projects]

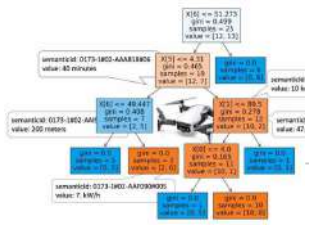
259.

[Streaming From Raspberry Pi to YouTube] It means camera is on and streaming only if you've opened a page with stream preview. It saves to camera and reduces CPU usage a lot. Streaming from Raspberry Pi to YouTube only when someone is watching (because Hackster.io change how the sourcecode is displayed I recommend..... Listed under: [Other Projects]

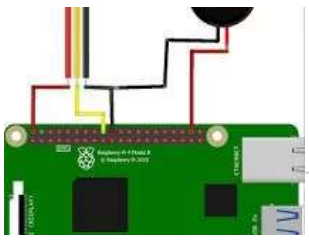
260. [Mind Patterning – Phase 1] Using EEG data to train a TensorFlow model on relaxed mind-states; the beginning of moving a mind to a machine! https://youtu.be/8UEDLBNcrpA What and Why I've always been fascinating by the idea of moving ones mind to a robot to live forever as a machine so..... d under: [Robotics - Automation Projects]

261. 

[Hands-On-Lab IoT Weather Station Using Windows 10] This example demonstrates how to leverage the power of Windows 10 IoT Core, and create a weather station using the Sparkfun weather shield. //build: Hands-on-lab WeatherStation This project is part of Microsoft's Hack the Home initiative, which provides makers with free, open-source components for effortless interfacing with..... Listed under: Other Projects

262. 

[Autonomous Marketplace Device] Building an autonomous decision making process for devices using machine learning. Overview The objective of this project is to build a decision making process for a device registered to the Industry Marketplace to automatically choose the best service requests based on matching eCl@ass capabilities. What..... Listed under: Other Projects

263. 

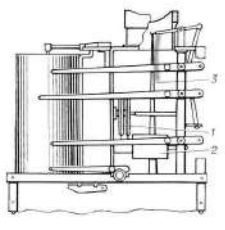
[How to Use the Raspberry Pi4 Camera And PIR Sensor to Send E] Introduction : In this tutorial, I'll show you how to send emails containing pictures using a Raspberry Introduction : In this tutorial , I'll show you how to send emails containing pictures using a Raspberry Pi4 and a motion detector and the Python programming language..... Listed under: Video - Camera - Imaging Projects

264.

[MagicMirror Alarm Clock] Yes, this is yet another alarm clock! But I feel like I'm not the only one deisiring a nice and simple object like this one to keep on the bedside table. It comes with useful features like a soft wake up (with chirping birds from a little bluetooth speaker), changing..... Listed under: Clock - Timer Projects

265.

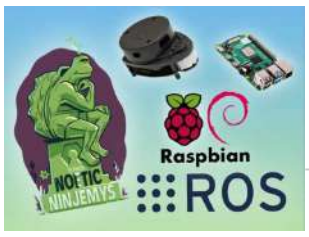
[Sixfab Raspberry Pi Cellular IoT HAT Setup] Sixfab Raspberry Pi Cellular IoT HAT lets you send or receive data over LTE-M networks the Telnyx SIM covers without needing gateways. Sixfab Raspberry Pi Cellular IoT HAT allows you to send or receive data over LTE-M cellular networks that the Telnyx SIM has access to without..... Listed under: Other Projects

266. 

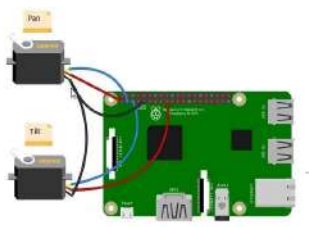
[Transportation conditions logging monitor] A small pill to drop in any parcel or container or just wear which will monitor and log all physical conditions along the path. Transportation conditions logging monitor The goal of this project is to offer an inexpensive method for independent non-invasive control of conditions..... Listed under: Metering - Instrument Projects

267.

[Quick Jaw Inclinometer] A brand new approache for determining the values of HCI, Bennett angle and ISS. Despite the dental field is in the era of CAD / CAM the dentists and dental technicians still face the never ending dilemma which is the dental occlusion, dental occlusion is..... Listed under: Metering - Instrument Projects

268. 

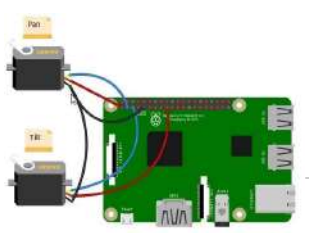
[LiDAR integration with ROS Noetic on Raspberry Pi OS] The aim of this tutorial is to use the ROS Noetic on a Raspberry Pi to test the performance of the low-cost RPLiDAR A1M8 by Slamtec. The Robot Operating System (ROS) is a set of software libraries and tools used to build robotic systems and..... Listed under: Other Projects

269. 

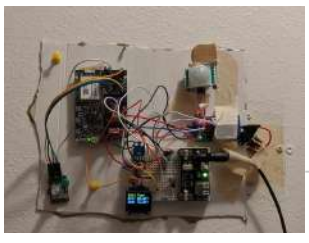
[Raspberry Pi Pan Tilt Object Tracker using OpenCV] In this post, you are going to learn about how to build a Raspberry Pi Pan Tilt Object Tracker using OpenCV. To control the servos, I have used pigpio module instead of RPi.GPIO library (which is the most commonly used) because I find servos jittering..... Listed under: Security - Safety Projects

270.

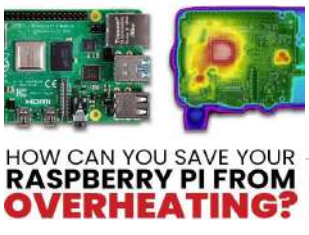
[Raven Pi Security Camera] Look out, Raven Pi is watching you! With its swivelling head, piercing red eyes and loudly Poe-quoting speaker no motion is left un-noticed. This plastic raven is enjoying a new after-life as a practical yet creepy security camera, the Raven Pi. It has a Raspberry..... Listed under: Security - Safety Projects

271. 

[Raspberry Pi Pan Tilt Face Tracker Using OpenCV] In this post, you are going to learn about how to build a Raspberry Pi pan tilt face tracker using OpenCV. We will write the code to make it work for known as well as unknown faces. For known faces, we will have to train..... Listed under: Video - Camera - Imaging Projects

272. 

[Smart Thermostat with runtime prediction] Smart Thermostat with motion detection, daily settable schedule from server and temperature history upload to database. The Azure SphereMT3620 Smart Thermostat was made for a final project for a college course. The idea behind this smart thermostat was to have a schedule that can be..... Listed under: [Medical - Health based Projects]

273. 

[Save your Raspberry Pi from overheating? – SB Components] One of the problems that a user wants to overcome is the overheating of components because it decreases the speed of the Raspberry Pi... How to solve problem of overheating in Raspberry Pi PiFan is a device that is used by people to cool down the..... Listed under: [Other Projects]

274.

[SIM7600-A Raspberry Pi 4G Hat & Telnyx IoT SIM Setup] The SIM7600A 4G HAT can be attached to a Raspberry Pi to empower connectivity for IoT apps. The SIM7600A 4G HAT is a 4G communication and GNSS positioning module, which supports LTE CAT4 up to 150Mbps for downlink data transfer. It is pretty low power..... Listed under: [Other Projects]

275.

[WebCam Motion Detection With Motioneyeos Using Raspberry Pi] How to make your own webcam as a motion detection camera, which will not only stream live video but also send you motion captured video. In this tutorial we will learn, how to make your own webcam as a motion detection camera, which will not..... Listed under: [Video - Camera - Imaging Projects]

276.

[Line tracking sensor with RPi] Use a Line Tracker to detect if a door is open, or if a line is crossed with only one sensor and a raspberry pi About A simple exemple to create a line tracker or detect if a door is opened with only one KY-033..... Listed under: [Sensor - Transducer - Detector Projects]

277.

[GardenPi powered by Neptune] Highly scalable and powerful irrigation / hydroponic & aquaponic control system managing up to 32 zones with automation and sensors. Overview & Theory of Operation GardenPi, powered by Neptune.py is designed to manage, monitor, and control a series of sprinkler valves and a multitude of..... Listed under: [Other Projects]

278.

[Interactive Laser Projector Using Zigbee Sensors] How to use a portable laser projector to project on any surface interactively, using the Gravio Edge computing platform and Zigbee sensors. In this tutorial we learn how to set up a Raspberry Pi to connect to a PIR sensor using the Gravio Platform and..... Listed under: [Sensor - Transducer - Detector Projects]

279.

[Wireless Video Surveillance Robot using Raspberry Pi] In this post, you are going to learn how to build a Wireless Video Surveillance Robot using Raspberry Pi. In this post, you are going to learn how to build a Wireless Video Surveillance Robot using Raspberry Pi. You will be able to control it..... Listed under: [Wireless projects]

280.

[Smart Home] This project is submitted to Deakin University, School of IT, for Unit SIT210 - Embedded Systems Development. Problem Statement: Even though there are a lot of security systems that are present in the market but most involve the use of motion sensors and CCTV camera..... Listed under: [Security - Safety Projects]

281.

[Trick or Treat Dispenser] Voice-activated treat dispenser. COVID-19. Novel coronavirus. Social Distancing. Despair. Loneliness. No friends. It's the opposite of Halloween. I love Halloween. One of my favorite holidays of all time, ever since I got to dress up like Gordy from Star Trek (life goals). So, in this..... Listed under: [Medical - Health based Projects]

282.

[Zombie Detecting Smart Security Owl (Deep Learning)] Zombie Detecting Smart Security Owl (Deep Learning) https://youtu.be/aLX4btGs_x8 Hi everyone, welcome to T3chFlicks! In this Halloween tutorial, we'll be showing you how we put a super spooky twist on a mundane household classic: the security camera. How?! We've made a night vision owl which uses..... Listed under: [Security - Safety Projects]

283.

[Build a Kubernetes Intelligent Edge Cluster on Raspberry Pi] Building a Kubernetes "Intelligent Edge" cluster on Raspberry Pi is a great learning experience Introduction Building a Kubernetes Intelligent Edge cluster on Raspberry Pi is a great learning experience, a stepping stone to building robust Intelligent Edge solutions, and an awesome way to impress your friends. Skills you develop..... Listed under: [Other Projects]

284. [Access control with QR, RFID and temperature verification] This Raspi prototype reads QR and RFID, checks guest temperature and temotely authenticates to grant barrier access. Post Covid-19 world turned out to be a little different. Now, before granting access to certain private neighborhoods, companies and

schools, a temperature check is required. This Raspberry..... Listed under: Temperature Measurement Projects

285.

Environmental sensor API with a RPi Use a GY-91 Multi-Sensor Module to have a full Temperature/Gyro/ Accelerometer/Compass/Pressure API using flask and Python 3. About A little project to create an API with a GY-91 multi-sensor module that includes MPU9250 BMP280 modules with This project is also compatible with the BMP280 module. But..... Listed under: Sensor - Transducer - Detector Projects

286.

Make Yourself a Video Surveillance System in Minutes Use a single-board computer or spare laptop, a webcam and free software to build your own surveillance system. Deploy the project to your account Once you're logged into your balenaCloud account (remember, the first ten devices are free and fully-featured), click the link below, and..... Listed under: Other Projects

287.

Weekend with Pi-4 Raspberry Pi is a powerful computer on a small form factor. I will show you how to exploit its full capability in this weekend project Raspberry Pi generally falls into a category of Internet of Things (IoT). Microsoft for some strange reasons pulled its plug..... Listed under: Other Projects

288. ASMAv2 with OpenVINO An autonomous drone that uses deep learning to identify if people are maintaining social distancing or not. High Degree of Red = High Risk. Inspiration For a couple of years, we have been building and flying drones. This was something that we enjoyed and considered..... Listed under: Video - Camera - Imaging Projects

289.

What Do I Build Next? A StereoPi Based Tank Vehicle Well, I received, setup my StereoPi Crowd Supply Kit, now to make it mobile using common components. What Do I Build Next? It's been awhile since I last published any project. I have started many projects and experimented with the Nvidia Jetson Nano, the Atomic..... Listed under: Phone Projects

290.

How to interface servo motor with Raspberry pi How to interface servo motor with Raspberry pi In this project, we will Know about How to interface servo motor with Raspberry pi For this project, we will be using the Raspberry Pi 4 and Tower Pro MG995 Servo Motor. Below is a list of..... Listed under: Motor Projects

291.

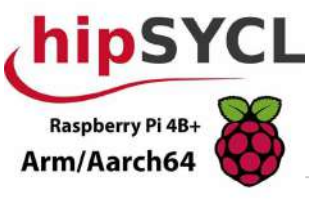
MSLA Smooth Time-Lapse Create beautiful time-lapse video of your 3D Resin prints. This technique makes your prints look like they just rise from the vat. This project uses a Raspberry Pi along with the new Pi HQ Camera to create smooth time-lapse videos for MSLA 3D printers. The..... Listed under: Clock - Timer Projects

292.

EMAR Mini – Emergency Assistance Robot EMAR Mini is a minature version of EMAR, an open-source Emergency Robot Assistant to assist doctors during the COVID-19 pandemic. The following guide will take you through setting up and installing EMAR Mini Emergency Assistance Robot. The Raspberry Pi 4 homes the EMAR Mini software and..... Listed under: Robotics - Automation Projects

293.

DARVA – The Event Assistant DARVA is a cute animated robot that will assist us at events, by having a chat with people so we don't have to repeat ourselves too much. Overview Introduction and Showcase VideoAnalog RobotDigitized RobotVirtual AssistantRaspberry Pi 4DARVA Introduction and Showcase Video DARVA is a cute..... Listed under: Robotics - Automation Projects

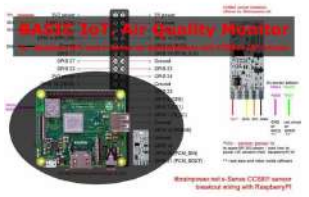
294. 

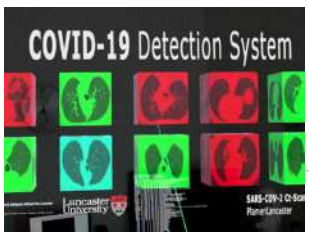
Parallel Computing On Raspberry Pi 4B+ IoT Boards Made Easy Building and running a parallel code in C++17, implemented using Khronos CL/SYCL-model specification, on Raspberry Pi IoT boards. Our Goals... This project provides the useful guidelines, tips and tutorials for building a modern parallel code in C++17/2x0, implemented using CL/SYCL programming model, and running it..... Listed under: Development Board - Kits Projects

295.

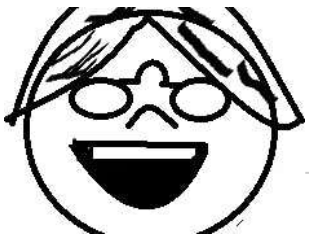
Basic IoT – RaspberryPI HDC2010 how to Basic IoT - RaspberryPI and HDC2010 I2C breakout by itbrainpower. net - RPI HDC2010 temperature and humidity sensor how to About this tutorial This tutorial address Raspberry PI 4, 3B+, 3B, 3A+, II, B, Zero and Zero W hardware and software integration with s-Sense itbrainpower.net HDC2010..... Listed under: Temperature Measurement Projects

296. Basic IoT – RaspberryPI CCS811 air quality monitoring AWS, Azure or GCP? Whatever.. sensors 1'st! Air quality CO2 and tVOC with temperature and humidity compensation algorithm - RPI how to. About this tutorial This tutorial address Raspberry PI 4, 3B+, 3B, 3A+, II, B, Zero and Zero W hardware and software integration with..... Listed under: Metering - Instrument Projects

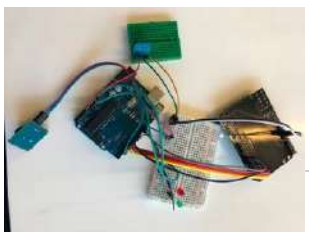


297. 

Magic Leap 1 COVID-19 Detection System Build your own free Magic Leap 1 COVID-19 Detection System. This project uses Magic Leap 1, TensorFlow, Unity & Raspberry Pi 4. Introduction The Magic Leap 1 COVID-19 Detection System 2020 uses Tensorflow 2, Raspberry Pi 4 & Magic Leap 1 to provide a spatial..... Listed under: Medical - Health based Projects

298. 

Open Source Rehabilitation Aid for Patients after Surgery Problem That we Want to Solve After surgeries, many people feel weak and bloated. In order to fix this, they have to do exercises, however, many people don't realize this, or feel overwhelmed by the sheer number of things on the internet. We decided to..... Listed under: Medical - Health based Projects

299. 

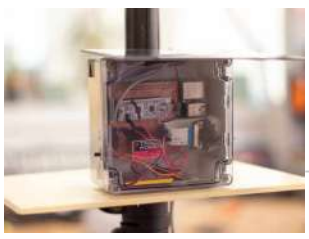
Life Saver The Life Saver is a product that helps to eliminate the problem of leaving your kids in the car and them getting heat stroke. The Life Saver is a product that displays the temperature on the lcd display and when the temperature is over 35..... Listed under: Temperature Measurement Projects

300.

Azure IoT Edge on Raspberry Pi Buster This article is a "tips and tricks" for running Azure IoT Edge on Raspberry Pi. Plus Raspberry Pi 4 Tips for cooling, USB 3, and Docker. Azure IoT Edge on Raspberry Pi Buster plus tips for Raspberry Pi 4 Useful References Azure IoT EdgeAzure Custom..... Listed under: Raspberry Programmer Projects

301.

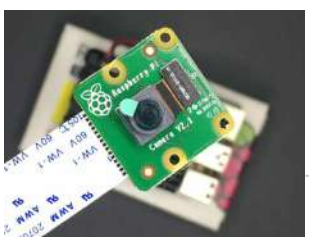
Arduino Controller for Automated 360° Product Photography Let's build an arduino based controller that controls a steppermotor and a camera shutter. Together with a steppermotor driven turntable, this is a powerful and low cost system for automated 360° product photography or photogrammetry The automatic camera shutter is based on a great library from..... Listed under: Video - Camera - Imaging Projects

302. 

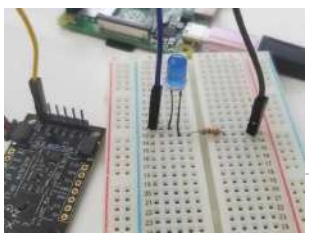
Embedded System to Detect Wildfire Creating a system in order to detect wildfire using deep learning programmation on a Raspberry Pi 4 and a Wisol module by Sigfox. https://youtu.be/_S4p_cp7F9k Hello everyone ! Before explaining in details our project and its setup, we wanted to tell you that it is a..... Listed under: Other Projects

303.

Four Pies We give you a quick overview and build a project to welcome the Raspberry Pi 4 to the world! Overview Below a quick overview of the content. Introduction and showcase videoPiePi3.14PiesResult Introduction and showcase video To welcome and celebrate the new Raspberry Pi 4, we're..... Listed under: Raspberry Programmer Projects

304. 

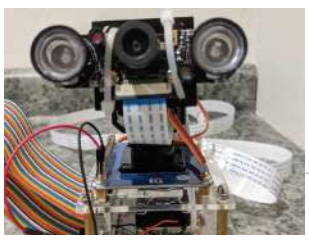
Getting Started with Raspberry Pi Camera In this tutorial, you'll learn how to use and connect a camera to Raspberry Pi 4 Model B. Brief overview Raspberry Pi Camera v2.1 is equipped with a 8 megapixel Sony IMX219 image sensor and improved fixed focus. It is compatible with all Raspberry Pi..... Listed under: Video - Camera - Imaging Projects

305. 

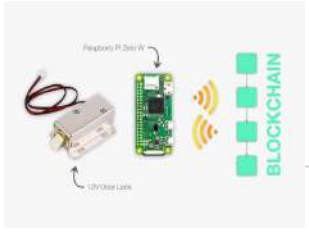
Double Tap Recognition with BerryIMUv3 The BerryIMUv3 makes it easy to detect double taps, which can be used to control the GPIO of an a Raspberry Pi. The accelerometer (LSM6DSL) on the BerryIMUv3 has built in double tap detection, which makes it very easy to detect double taps without the need for..... Listed under: Raspberry Programmer Projects

306.

Seeed Studio – ICE Tower CPU Cooling Fan Testing the Seeed Studio – ICE Tower CPU Cooling Fan for Raspberry Pi 4! How well does it cool the toasty new single-board computer? Summer Meltdown It's that time of year again where things are too hot for computers running heavy loads – you can try Oil-Cooling or..... Listed under: Other Projects

307. 

Face Tracking and Identification Using Walle-ng Track faces and receive notifications in real-time using a Raspberry Pi 4, Intel Neural Compute Stick, and AWS. Project Description This project is focused on edge computing using a Raspberry Pi, Intel Movidius Compute Stick, and a Pi-cam to detect, track, and identify faces from..... Listed under: Security - Safety Projects

308. 

A Blockchain-Powered Smart-Lock Securely open/close your front door with a smart contract Ever wondered why many consider blockchain to be a game-changer in the IoT space? This example describes how to build a very simple smart-lock powered by a Blockchain smart contract to make some considerations around this..... Listed under: Raspberry Programmer Projects

309.

Sensing the Air Quality A low-cost IoT air quality monitor based on a Raspberry Pi 4. Sensing the Air Quality A low-cost IoT air quality monitor based on the new Raspberry Pi 4. I have the privilege of living in one of the most beautiful countries in the world,..... Listed under: Metering - Instrument Projects

310.

Get Humidity/Temperature from Web LAN Bottle server that handles HTTP requests using Raspberry Pi 4, Adafruit DHT11 and a RGB LED. About The idea of the project is very simple. After accessing the web page, you can see in real time what temperature and humidity is in the area of the DHT11 sensor used by the Raspberry Pi. Sending..... Listed under: Temperature Measurement Projects

311.

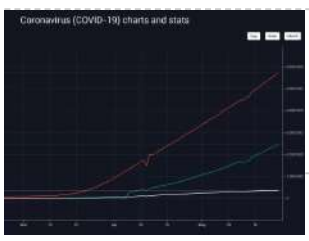
The Raspberry Pi Compute Module 4 Review – SB Components The Compute Module 4 is basically a Raspberry Pi 4 model B, with all the ports cut off. Instead of the ports... It's become a tradition that we follow each Raspberry Pi model with a system-on-module variant based on the same core silicon. Raspberry Pi..... Listed under: Other Projects

312.

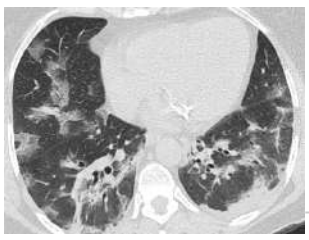
Making Art by Judging Reddit Is the Raspberry Pi 4 powerful enough to judge Reddit? This project is all about answering the important questions. Overview Below a quick overview of the content. Introduction and showcase videoFetching the latest Reddit commentScoring the commentFrom score to colourResult Introduction and showcase video We've..... Listed under: Other Projects

313.

RPM & RGB Mod for 52pi Ice Tower Heatsink for Raspberry Pi 4 52pi ICE Tower makes your Raspberry Pi 4 look like a beast but lacks fan and LEDs controls. I fixed that! The coolest heatsink for Raspberry Pi 4 Improving the design of the 52pi ICE Tower Heatsink https://youtu.be/_RA3F8sWsKM Some time ago I reviewed the ICE Cooling..... Listed under: Feature, Other Projects

314. 

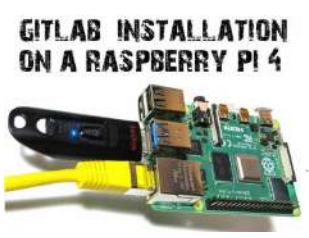
How to build a Coronavirus Chart and run on embedded devices A step-by-step guide to connecting your application of a chart to an online database of coronavirus information. Coronavirus has grown a lot globally, and a lot of public datasets have shown up to provide live and historical information about the spread of the virus, but..... Listed under: Medical - Health based Projects

315. 

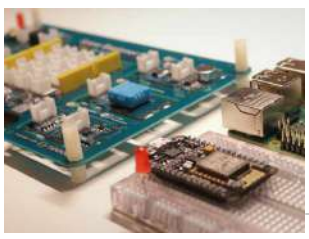
COVID-19 TensorFlow DenseNet Classifier For Raspberry Pi 4 TensorFlow 2 implementation of DenseNet and the SARS-COV-2 Ct-Scan Dataset by our collaborators, Plamenlancaster/LIRA. Introduction This project provides the source codes and tutorial for running a COVID-19 detection system on a Raspberry Pi 4. This project uses the trained model from Project 2 and has been modfied..... Listed under: Medical - Health based Projects

316.

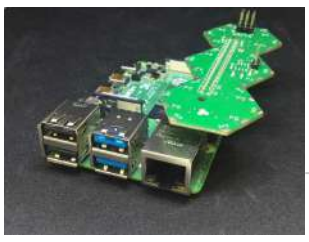
Create a Minecraft Server for the Raspberry Pi 4 with balena If you want to host your own Minecraft Server -- all from a Raspberry Pi -- this project is for you! How to create a Minecraft Server for the Raspberry Pi 4 with balena If you want to host your own Minecraft Server -- all..... Listed under: Internet - Ethernet - LAN Projects

317. 

Installation of GitLab CE on a Raspberry Pi 4 (4GB) Build your own GitLab server on a Raspberry Pi 4 (4GB) Step 1: Install GitLab on a Raspberry Pi 4 Step 2: Configure the GitLab server Installation of GitLab CE on a Raspberry Pi 4 (4GB) Install GitLab on a Raspberry Pi 4Configure the GitLab..... Listed under: Other Projects

318. 

Smart Home IoT System Based on Raspberry Pi 4 A smart home system helps users control household devices with web UI or Tmall Elf. (Author: Huang Hao, Wu Shu) Thanks to the original writers Huang Hao and Wu Shu for their great support for this article. https://youtu.be/dyO7J_TPmkU 1. Installing system for Raspberry with integrated Home Assistant First of..... Listed under: Home Automation Projects

319. 

Hexabitz-Raspberry pi Interface Raspberry pi interface with Hexabitz modules which make them useful for new brand projects This tutorial will walk through how to setup a small demo project involving a Raspberry Pi 4, HF1R0x and H01R0x, H08R6x and H0BR4x. By the end of this article, you will..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

320.

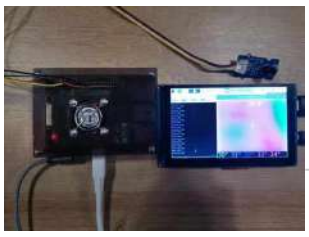
RGB-D SLAM With Kinect on Raspberry Pi 4 ROS Melodic It's not 2020 if you can't build robots of doom out of scrap consumer electronics... (c)freenect Github issue https://youtu.be/c5punaP01kU Last year I wrote an article about building and installing ROS Melodic on new (at that time) Raspberry Pi with Debian Buster OS. The article has received a..... Listed under: Other Projects

321.

[WhatsApp Halloween-Themed RFID Talking Doorbell w/ RGB Eyes] Startle your guests who do not have an entrance permit (RFID tag) and get notified w/ WhatsApp messages without checking the door 🙂 Despite the fact that making a hilarious yet not deceitful joke with a jack-o'-lantern on Halloween night is not unobtrusive, I decided..... Listed under: [Phone Projects]

322.

[Getting Started with ROS Melodic on Raspberry Pi 4 Model B] In this post, you will learn how to connect a LiDAR to your Raspberry Pi 4 Model B using ROS Melodic on Ubuntu Desktop 18.04.3. The Robot Operating System (ROS) is a set of software libraries and tools used to build robotic systems and applications..... Listed under: [Other Projects]

323. 

[MLX90640 IR Thermal Camera Working with Raspberry Pi 4] Using Raspberry Pi 4 to drive MLX90640 IR Thermal Camera var I2C interface in order to detect calorific objects. Want to detect something that can emit heat and figure out their temperatures? The MLX90640 IR thermal camera can display the relative temperature and shape of..... Listed under: [Video - Camera - Imaging Projects]

324.

[The Swear Bear] Do you also swear too much? Don't worry, this artificial intelligence powered, internet of things enabled swear jar is here to help! Introduction How does it work? Well, it listens to your every word and detects profanity (AI). When caught, it instantly tells on you..... Listed under: [Game - Entertainment Projects]

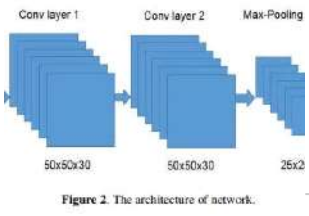
325. 

Figure 2. The architecture of network.

[Acute Lymphoblastic Leukemia Classifier For Raspberry Pi 4] A Tensorflow 2 CNN implementation for detecting Acute Lymphoblastic Leukemia on a Raspberry Pi 4. Introduction This project is the classifier that is used in Acute the Lymphoblastic Leukemia Detection System 2020. The network provided in this project was originally created in ALL research papers evaluation..... Listed under: [Other Projects]

326.

[Usage of GitLab on Raspberry Pi 4 – Branches, Issues, Merge] Usage of Issues, Branches and Merge Requests with Git on your own GitLab server running on a Raspberry Pi 4 with 4GB! Usage of GitLab CE on a Raspberry Pi 4 (4GB) -Branches, Issues, Merge Requests Create Issues on GitLabCreate a branch to solve an..... Listed under: [Other Projects]

327.

[E-ink Dashboard] This is a E-ink dashboard that provides real-time information pulled from API using a Raspberry Pi Zero. I've always been interested in projects that provide you real-time information from selected sources, seeing people doing smart mirror projects made me want to do one for myself,..... Listed under: [Development Board - Kits Projects]

328.

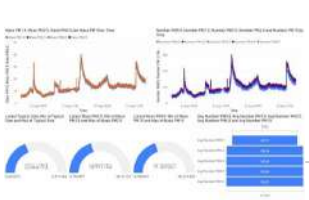
[Low cost Samba Server – Raspberry PI 4] Blueprint - Hardware choice-simple installation with RASPBIAN - troubleshooting Introduction In looking for a solution to management of my huge home data in many TB Terabyte, which my family members have created from Home Computer, digital camera, smartphone and from internet download, I have found..... Listed under: [Internet - Ethernet - LAN Projects]

329.

[Getting Started with the Raspberry Pi 4 Desktop Kit] The Raspberry Pi 4 is a small, powerful mini computer, with dual-screen 4K support, USB 3.0, a new CPU and GPU, and up to 4GB RAM. In this tutorial, you will learn how to set up the Raspberry Pi 4 Model B and install everything..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

330.

[TMD-2: Turing Machine Demonstrator Mark 2] Develop a Turing machine that is simple to program and easy to understand. This tutorial is a follow-on to my TMD-1: A Turing Machine Demonstrator project. I was really happy with the way that TMD-1 turned out. I believe I succeeded in creating a Turing machine that..... Listed under: [Other Projects]

331. 

[Air Quality Monitor using Raspberry Pi 4, SPS30 and Azure] Connect a particulate matter sensor to a Raspberry Pi and obtain easy-to-read graphs based on the read data using Microsoft Azure. Building the OS The first step in using the Raspberry Pi 4 for this project is to build a minimal Linux distribution using the..... Listed under: [Metering - Instrument Projects]

332.

[Offline Speech Recognition on Raspberry Pi 4 with Respeaker] Faster than real-time! Based on Mozilla's DeepSpeech Engine 0.9.* https://youtu.be/QwrvpYjo1QE UPDATE June 2020: Updated commands for DeepSpeech 0.7.* .Screenshots, except for Raspberry Pi 4 stayed the same. Benchmarks table also hasn't changed, since I didn't notice any inference speed gain. But it seems there was accuracy..... Listed under: [Other Projects]

333.

GitLab on a Raspberry Pi 4: OLED Display, Cooling, Update Maintenance of GitLab CE on a Raspberry Pi 4 (4GB) (Part 4) - OLED Status Display, passiv Cooling, GitLab Update Maintenance of GitLab CE on a Raspberry Pi 4 (4GB) (Part 4) (4GB) Backup GitLab dataUpdate GitLab VersionShutdown GitLabCleanup garbage from filesystemCooling and fancy stuff..... Listed under: LED Projects

334.

Overclocking of the Raspberry Pi 4 Introduction. If one subject is surrounded by myths, it is overclocking. It would be dangerous and destroy your Raspberry Pi. This article provides the essential background, after which you can safely overclock the Raspberry Pi to 2.1 GHz. Theory. The BCM2711 chip on the Raspberry..... Listed under: Clock - Timer Projects

335.

Audio-visual face mask detection system on the Jetson Nano This work implements face mask recognition system on the Jetson Nano using Jupyter Lab headlessly. Currently, Face-mask recognition is considered the most significant part in computer vision and image analysis, and thus it receives much more research in its different components such as the enhancement of its..... Listed under: Sound - Audio Projects

336.

ROS Melodic on Raspberry Pi 4 [Debian Buster] + RPLIDAR A1M8 UPDATED, April 2020 This article describes the process of compiling ROS Melodic from source on new Raspberry Pi 4. https://youtu.be/k5KUd68NrpY This article will cover the process of installing ROS Melodic Morenia on Raspberry Pi 4 running the latest Debian Buster and how to use RPLIDAR..... Listed under: Other Projects

337.

Freezing a Raspberry Pi 4 It's summertime; so it's time to cool the new Raspberry Pi 4 in a crazy way! Why? First off do not try this at home – it may damage your Pi or cause things in your freezer to thaw if the door is left ajar in anyway. This..... Listed under: Other Projects

338.

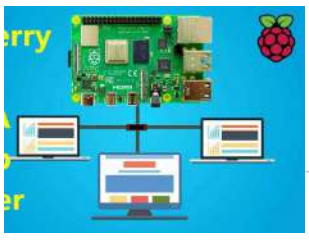
NextCloud Server on Raspberry Pi A prototype to minimize the number of staffs having to interact w/ people to notify them wearing masks live streaming while operating. During these unprecedented times - COVID-19 pandemic - one of the most crucial precautions to falter the detrimental effects of coronavirus is to..... Listed under: Internet - Ethernet - LAN Projects

339.

Raspberry pi 4 GPIO controlled cooling fan Using some python, few electronics parts and a fan, I added a GPIO controlled fan to my RPI 4. https://youtu.be/DSI4vytLg8U While working on the raspberry live video with tkinter I noticed that my rpi 4 (knows issue) tend to run really hot. When I ordered the..... Listed under: Other Projects

340.

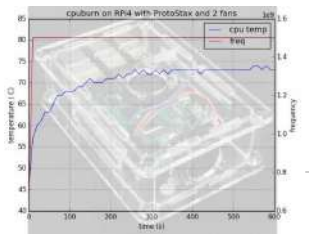
Raspberry Pi 4/3 Camera Case Assembly Instructions This guide will show you how to assemble the Raspberry Pi 4/3 Camera Case . All you'll need is a simple cross-head screwdriver (If you have The Pi Hut This guide will show you how to assemble the Raspberry Pi 4/3 Camera Case . All you'll need is a simple..... Listed under: Video - Camera - Imaging Projects

341. 

Raspberry Pi 4 As A Web Server [Make Own Website] How to use Raspberry Pi 4 as a web server. In addition to that we will also see how to make web pages in HTML & style with CSS Story In this tutorial we will learn how to use Raspberry Pi 4 as a web..... Listed under: Development Board - Kits Projects

342.

Raspberry Pi 4 Setup with Mobile Hotspot How to setup a Raspberry Pi without keyboard, external monitor, mouse, power adapter and Ethernet cable? Hello, I'm new to Raspberry Pi. Here I'm sharing few experience, which I faced while setting Raspberry Pi board. After receiving pi, I started collecting all the required cables..... Listed under: Phone Projects

343. 

Raspberry Pi 4 – Conquering cpuburn with ProtoStax & 2 Fans Testing out Raspberry Pi 4's temperature profile with and without fan(s) using ProtoStax for Raspberry Pi B+/Model 4B enclosure/case. With my hands on my newly acquired Raspberry Pi 4, the first thing on my agenda was to make the necessary modifications to the ProtoStax for Raspberry..... Listed under: Other Projects

344.

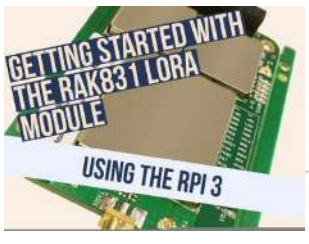
AI Noise Analyzer Analyze sounds using AI on the edge and fleet intelligence. Can we use AI to help us identify and quantify noise pollution? In this project, we're using a Coral Dev Board or a Raspberry Pi 4 with an attached Edge TPU to listen to ambient..... Listed under: Wifi / WLan Projects

345.

[Model to Monitor toxic bloom water sources](#) I remember reading about the 300 elephants found dead. Their tusks were intact and there was no evidence of poison. The mystery was solved and the water source containing toxic bloom of cyanobacterium. My project has two software components. Edge Pulse Machine Learning Model and..... Listed under: [Metering - Instrument Projects](#)

346.

[Raspberry Pi Based Weather Station](#) Nice looking weather forecast for Raspberry Pi Zero and Ili9341 based 2.8 inch TFT. I want to show you in this project how to build a nice looking weather station based on Raspberry Pi Zero W for wall mount with weather forecast and coloured 2.8..... Listed under: [Other Projects](#)

347. 

[Getting Started with the RAK831 LoRa Gateway and RPi3](#) This project takes you through all the steps required to get your RAK831 LoRa Gateway module up and running with WiFi as the backhaul. Introduction This step-by-step guide is aimed at developers who want to develop their very own lora gateway using the awesome RAK831..... Listed under: [Development Board - Kits Projects](#)

348.

[Custom Wake Word for Google Assistant on Raspberry Pi](#) ****UPDATE***** I have updated the custom wakeword project and here is the latest version https://www.hackster.io/shiva-siddharth/multiple-custom-wakewords-activation-of-google-assistant-d0c986 this is a much better improved of this project.**** Normally, you cannot voice activate Google Assistant SDK on Pi Zero W. By the method shown, not only can you voice activate Pi..... Listed under: [Internet - Ethernet - LAN Projects](#)

349.

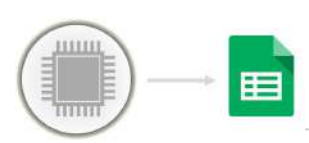
[Computer Vision as Motion Sensor for SmartThings](#) Using a Raspberry Pi 3 and a PiCam this computer vision powered sensor detects faces and sends presence data over LAN - UPNP to SmartThings. I will start by assuming that you have a Raspberry Pi 3 with a working camera and Open CV installed..... Listed under: [Sensor - Transducer - Detector Projects](#)

350.

[MATRIX Voice and MATRIX Creator Running Alexa (C++ Version)](#) This guide shows you how to set up Amazon Alexa on a Raspberry Pi using the MATRIX Voice or MATRIX Creator as a microphone. https://youtu.be/LqNAVxtbdSw Required Hardware Before getting started, let's review what you'll need. Raspberry Pi 3 (Recommended) or Pi 2 Model B (Supported).MATRIX Voice or MATRIX Creator - Raspberry Pi..... Listed under: [Sound - Audio Projects](#)

351.

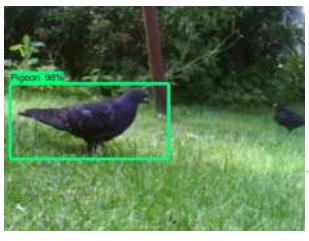
[Smart Disinfection and Sanitation Tunnel](#) The smart tunnel prevents further outspread of COVID-19 / SARS-CoV-2. It can disinfect a person fully in a time span of just 15 seconds. Introduction The Smart Disinfection and Sanitation Tunnel is a demonstration of how It has been designed to provide maximum protection to..... Listed under: [Other Projects](#)

352. 

[Pushing Data to Google Docs](#) Make your hardware push data to a Google spreadsheet. In this article I will explain how your hardware can push data into a Google spreadsheet. Push Versus Poll In the poll mechanism, as described in my previous article, the Google spreadsheet runs a script that sends a request to..... Listed under: [Internet - Ethernet - LAN Projects](#)

353.

[Motion sensor, alarm, video recording in HA on Raspberry Pi](#) Connecting the motion sensor, alarm and video recording in Home Assistant on Raspberry pi. I'd like to tell you about my little experience of working with Home Assistant (hereinafter – HA) on Raspberry pi. Further I'll speak about connecting the video registration functionality, the motion..... Listed under: [Sensor - Transducer - Detector Projects](#)

354. 

[Pigeon Detection System](#) Find pigeons and defend your birdhouse against these birds which never stop eating. Abstract The main goal was to develop a system, which detects pigeons and runs on a Raspberry Pi. It should be able to trigger an output to scare away the pigeons. Why..... Listed under: [Home Automation Projects](#)

355.

[YouTube Music Streaming for Google Assistant on Raspberry Pi](#) GassistPi -- Google Assistant for all Raspberry Pi Boards Pi Zero - forked and modified from warchildmd's repo (https://github.com/warchildmd/google-assistant-hotword-raspi) Features: Headless auto start on boot with multiple custom wakeword activation triggers.Voice control of GPIOs without IFTTT, api.ai, Actions SDK.Voice control of servo connected to RPi..... Listed under: [Sound - Audio Projects](#)

356.

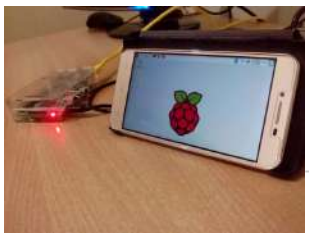
[Raspberry Pi Internet Radio and MP3 Player with Bluetooth](#) Project Replaced by: https://www.hackster.io/Granpino/raspiplayer-internet-radio-and-mp3-folder-player-rev2-4-3ddfdf This internet radio and MP3 player uses a 3.5 HDMI LCD touchscreen for operation. The original project was published by Adafruit. https://learn.adafruit.com/raspberry-pi-radio-player-with-touchscreen/overview The project uses MPC, MPD and Pygame. The project has been evolving over time. I am still trying to incorporate automatic album..... Listed under: [Radio Projects](#)

357.

[DAKboard – A Wifi Connected Wall Display](#) DAKboard is a wifi connected wall display for your photos, calendar, news, todo and weather. Have a spare monitor lying around or a new Raspberry Pi but don't know what to do with it? Perfect! Follow our instructions below to create a beautiful wall display..... Listed under: [Wifi / WLan Projects](#)

358.

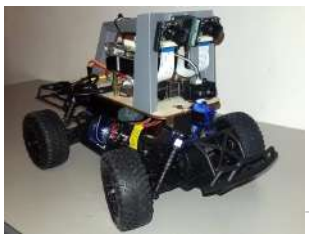
[Indoor Air Quality Monitor](#) Use a USB air-quality sensor dongle to quickly mount an indoor air monitoring system and prevent headaches and further impact on health. VOCs Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which..... Listed under: [Metering - Instrument Projects](#)

359. 

[Run Raspberry Pi on Smart Phone](#) Run Raspberry Pi on your phone with full display. Step 1: Getting Raspberry pi IP Address: To begin with the project, one will need to know the IP address of Raspberry Pi. In order to do so connect your Raspberry Pi with the LCD and,..... Listed under: [Phone Projects](#)

360.

[Radio-Astronomy with RTL-SDR, RPi and Amazon AWS IoT](#) Radio emissions from sky sources like Sun and Jupiter can be received and converted to digital domain for processing. UPDATE 3 - May 7, 2018 Please note that starting from version 9 the software makes usage of latest Skyfield version (1.3). You can install Skyfield using pip install..... Listed under: [Radio Projects](#)

361. 

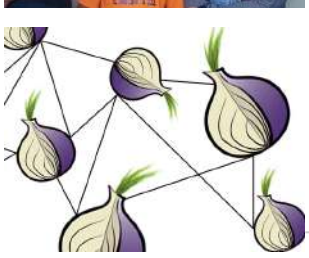
[Stereo Vision and LiDAR Powered Donkey Car](#) Donkey Car featuring the Ultra96 board, a Raspberry Pi, FPGA accelerated stereo vision, MIPI CSI-2 image acquisition, a LiDAR sensor and AI. In this project, I will document the build of a Donkey Car enhanced with an advanced vision system using FPGA accelerated stereo vision and LiDAR. The project consists of the following..... Listed under: [Car Projects](#)

362.

[Counting Objects In Movement Using Raspberry PI & OpenCV](#) What do you think in using Raspberry Pi & OpenCV to count moving objects that go in and out of a certain zone? Introduction Computer vision, doubtless, is a fantastic thing! Using this, a computer gains the capability to "see" and sensing better the environment..... Listed under: [Video - Camera - Imaging Projects](#)

363.

[World's Smartest Home feat. Blockchain Chores & Kids Crypto](#) Jarvis Farley is a home automation system I created to manage our kid's chores and allowance using blockchain. It also does 99 other things. The World's Smartest Home Featuring Jarvis Farley People talk about "Smart Homes" -- but I have created what I believe is the..... Listed under: [Home Automation Projects](#)

364. 

[Host your own free .onion website using Raspbian on RPi3](#) Set up a working webserver on your Raspberry Pi 3, and permanently connect it to Onion, hosting your very own free .onion website. A working version of the project can be found at: https://t0r.ch:100 (surface web) or https://darktorch5lgddvm.onion .onion domains There is more information about surface web and..... Listed under: [Development Board - Kits Projects](#)

365.

[Power Outage Sensor](#) Track the 230 VAC power line with your favorite HW using a small, efficient, and inexpensive circuit. In my wireless doorbell tutorial I gave the advice about how to get a digital signal from a 12 Vac source so it could be read with any desired HW..... Listed under: [Sensor - Transducer - Detector Projects](#)

366.

[SUBZero – A Simple Network-Attached Storage Device](#) An easy to use Raspberry Pi Zero USB file-level computer data storage server (frequently called Network-Attached Storage or NAS). INTRODUCTION Quite often I find myself on the go, in need of storing/sharing files locally with others without an accessible internet connection. Even with an internet..... Listed under: [Wireless projects](#)

367.

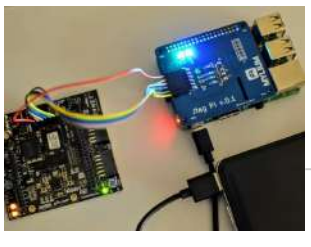
[Recycle Sorting Robot With Google Coral](#) Did you know that the average contamination rate in communities and businesses range up to 25%? That means one out of every four pieces of recycling you throw away doesn't get recycled. This is caused due to human error in recycling centers. Traditionally, workers will..... Listed under: [Robotics - Automation Projects](#)

368.

[Underwater Drone: The Story of the Madness](#) This article describes the design process, development and assembling operation of the underwater drone prototype powered by Raspberry Pi. I've watched a lot of programs about inventors on Discovery channel and once I decided to do something interesting by myself, so that it could be..... Listed under: [Development Board - Kits Projects](#)

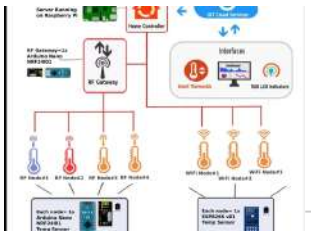
369.

Wedding Photo Booth with Raspberry Pi For a wedding or other event, you need a photo booth! You will find here how to do this awesome project which make all guests happy. Hi everybody, I got married last year. When we were looking for preparation of the D-day, we went to..... Listed under: Video - Camera - Imaging Projects

370. 
FPGA Remote Programmer Introduction One of the biggest advantages of FPGAs is that we can change it (reprogram it) many times. In most cases, we do it using either an onboard programmer (many development boards have them) or an external one. The most popular programmer is Platform Cable USB..... Listed under: Raspberry Programmer Projects

371.

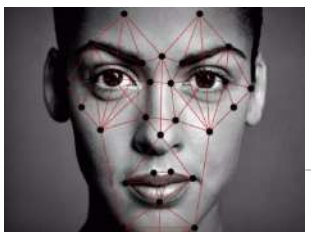
RaspiPlayer – Internet Radio and MP3 Folder Player Rev2.4 Internet radio with MP3 player over Bluetooth. This revision includes internet connection indicator and Folder Player. Story RaspiPlayer Rev 2.4 Raspberry Pi internet radio player with MP3 over Bluetooth. The latest revision includes internet connection indicator, and Folder Player feature. Installation Download the full raspbian Stretch orBuster image..... Listed under: Radio Projects

372. 
Mapping Household Temperature Flow with Cheap Sensors Story What I Want to Do Select the most inexpensive, scalable and easily configured components availableProgram and deploy as many temperature sensors as possible and connect to a web gatewayUse this data for more efficient automations via smart thermostat device, window controller, presence detection, smart..... Listed under: Temperature Measurement Projects

373.
Using STONE TFT LCD Control WS2812B_RGB lamp This project is to achieve RGB lamp control: Change the color of the lightChange the brightness of the lightChange the four modes of the lamp STONE TFT-LCD The STONE STVC070WT-01 is a 7-inch display module with a resolution of 800*480.This display module can be purchased..... Listed under: LCD Projects

374.

MATRIX Voice Running Alexa Demo [DEPRECATED] Set up Amazon's Alexa on a Raspberry Pi with a MATRIX Voice. Use the MATRIX mic array together with a third-party wake word engine. This guide provides step-by-step instructions for setting up AVS on a Raspberry Pi with a MATRIX Voice. It demonstrates how to access and test..... Listed under: Sound - Audio Projects

375. 
Raspberry Pi Facial Recognition So you want to control entry to your secret lair, huh? This project will allow you to use facial recognition using a Pi and AWS. Raspberry Pi Facial Recognition using AWS Rekognition and Pi-Timolo Description Pi-detector is used with Pi-Timolo to search motion generated images for face..... Listed under: Video - Camera - Imaging Projects

376.
Farmaid: Plant Disease Detection Robot Robot that drives around autonomously in greenhouse environment and identifies diseases. https://youtu.be/12BvNxfrQ7k Inspired by the work of plantvillage.psu.edu and iita.org, we wanted to use the DonkeyCar platform to build a autonomous robot that can move in a farm environment without damaging existing plants or soil..... Listed under: Robotics - Automation Projects

377.
Pi OS for Zynqberry: Adafruit RFM69 Radio with CircuitPython Adapting Adafruit's CircuitPython to use the RFM69HCW Radio FeatherWing on the Zynq-7000 series FPGAs. One of my most commonly used Raspberry Pi shields I discovered a few years ago is the 433 MHz RadioFruit RFM69HCW Transceiver Radio Bonnet from Adafruit. The RFM69HCW is a transceiver..... Listed under: Radio Projects

378.
Ultimate YouTube Live Streaming Camera! Make a dedicated YouTube live streaming camera using a Raspberry Pi! Idea As a YouTuber, I'm always looking for ways to streamline different tasks. Live streaming is definitely something that has the opportunity to be a LOT simpler. It would be nice if you just had a..... Listed under: Video - Camera - Imaging Projects

379.
The hydroMazing Smart Garden System The hydroMazing system manages your growing environment by making localized data-driven decisions so that you don't have to worry. https://youtu.be/9WvtBJmLiU8 It wasn't my intention to make a product. I simply wanted to solve a common problem. I want to grow plants indoors or under controlled..... Listed under: Home Automation Projects

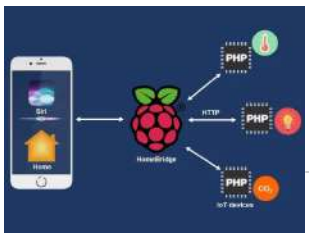
380.
Face Recognition This project is used on the IoT and places of security that are important for identifying people. This project was built as the final deliverable for our Embedded System course. Introduction In this project we are using OpenCv in Raspberry Pi. Get the image from the..... Listed under: Video - Camera - Imaging Projects

381. Distributed Emergency Communication System A rapidly deployable distributed Wi-Fi IEEE 802.11s mesh communication network with cellular modem Int t access for emergency disasters. Features Internet access via a USB cellular modemWi-Fi IEEE 802.11s mesh distributed communications3D printed water-proof

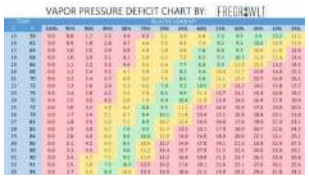
enclosureOpen source software, open hardwareCompactLong range open hardware omni directional antenna (up..... Listed under: Wifi / WLan Projects

382.

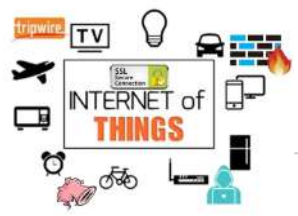
TensorFlow Object Detection with Home-Assistant Get started with TensorFlow object detection in your home automation projects using Home-Assistant. Introduction WARNING: there are currently issues with the Tensorflow integration in Home Assistant, which arise due to complexity of supporting Tensorflow on multiple platforms. I do not recommend attempting to follow this guide..... Listed under: Home Automation Projects

383. 

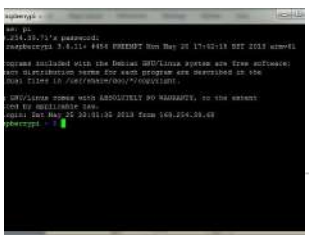
DIY HomeKit-Enabled Devices This shows how to make smart home devices, which can be controlled/monitored via Siri or Home app. Let's make the smart home devices and control/monitor it via Apple Siri or Apple Home App. After reading this tutorial, you are able to make Siri and Home..... Listed under: Home Automation Projects

384. 

Kindbot: Home Garden Automation Hub Kindbot packs an app, sensors, voice-control, and state-of-the-art computer vision to eliminate guess work & maximize yields. Watch Kindbot Grow!: kindbot.io and Twitter: @Kindbot_io Instagram: @kindbot Plant Diagnosis Service: buddy.kindbot.io Download Buddy for Android! (coming soon to iOS): Go to Google Play Store The Dawn of Kindbot At the turn of 2018, we began developing a plant..... Listed under: Home Automation Projects

385. 

IoT Security: Tips to Protect your Device from Bad Hackers Making stuffs is cool, making secured stuffs is better! We discuss how to secure your Raspberry Pis using Firewall, IDS, and SSL/TLS Motivation When i hacked my door to open it with OpenSesame, I supposed that nobody will try to hack my hacked door to take..... Listed under: Security - Safety Projects

386. 

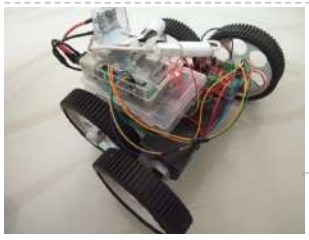
Sharing WiFi with Raspberry Pi using a LAN Cable This hack will allow you to directly share WiFi from a PC to a Raspberry Pi connected through a LAN Cable without any modification on the Pi In order to login into the Shell of the Raspberry Pi connected directly to my PC via a..... Listed under: Wifi / WLan Projects

387.

Raspberry Pi Car Stereo Internet connected car stereo with obd 2 and remote start. Please mind the mess! I am still working on this. So when I went looking for information on building a Raspberry Pi based stereo for my truck I came across this blog by Christian Brauweiler. He has..... Listed under: Car Projects

388.

Get Started w/ESP32 on the MATRIX Voice Required Hardware Before you get started, let's review what you'll need. Raspberry Pi 3 (Recommended) or Pi 2 Model B (Supported) - Buy on Element14 - Pi 3 or Pi 2.MATRIX Voice ESP32 Version (Wi-Fi, Bluetooth, Microcontroller) - The Raspberry Pi does not have a built-in microphone, the MATRIX Voice has an..... Listed under: Sound - Audio Projects

389. 

Wifi Controlled Robot Using Raspberry Pi This tutorial will show you to develop a Python based wireless robot which can be controlled from anywhere around the world using Wifi. https://youtu.be/F_nfnpSZ5_c About the project This is demo of a wifi controlled Raspberry Pi robot which can be controlled over network using simple..... Listed under: Robotics - Automation Projects

390.

Multiple Custom Wakewords Activation of Google Assistant Voice activate Google Assistant SDK on Pi using multiple custom wakewords. Works on Pi 3 and Pi Zero W. https://youtu.be/WhMULwtYfhw https://youtu.be/O37IwG-mOIs This has been implemented using Snowboy for the hotword service. For some "Mysterious" reason, the assistant.start_conversation of the SDK does not seem to work..... Listed under: Sound - Audio Projects

391.

Octopod: Smart IoT Home/Industry Automation Project Octopod, a uniquely shaped full automation system that allows you to monitor your industry and keep security with AI and smart RFID locks. There are many IoT automation projects out there, but trust me there is nothing like this! Octopod is made using NodeMCU (MAX32620FTHR or Arduino..... Listed under: Home Automation Projects

392.

Real Harry Potter Wand with Computer Vision This project shows how you can bring the Wizarding of Harry Potter to reality with computer vision and machine learning! "Any Sufficiently Advanced Technology is Indistinguishable from Magic" - Arthur C. Clarke A few months back my brother visited Japan and had real wizarding experience in..... Listed under: Video - Camera - Imaging Projects

393. 1986 PiNG Video Doorbell The PiNG Video Doorbell is powered by a Raspberry Pi and uses Google Duo to video call you on your phone when a visitor presses the button. 1986 Raspberry Pi Video Doorbell The PiNG Video Doorbell is powered by a Raspberry Pi and is retro-stylishly..... Listed under: Sound - Audio Projects

394.

[Intellisaurus – Dinosaur Robot Kit](#) An open source kit to build a walking smart robot dinosaur. Now open source on GitHub: https://github.com/JacquinBuchanan/Intellisaurus https://youtu.be/XLSo0UgGVvM WHAT CAN I DO WITH INTELLISAURUS? Intellisaurus is intended for many skill levels. The easy to follow instructions allow someone with a modest skill level to assemble the..... Listed under: Robotics - Automation Projects

395.

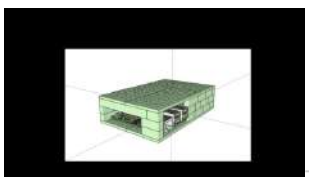
[MATRIX Voice and MATRIX Creator Running Snips.ai](#) Learn how to install the Snips.ai offline voice assistant, through the SAM CLI tool, for the MATRIX Creator and MATRIX Voice. THIS GUIDE HAS BEEN DEPRECATED The Snips Console has been closed and cannot be used anymore. If you're looking for an alternative voice assistant, you can..... Listed under: Sound - Audio Projects

396.

[DIY Environment and Air Quality Monitor](#) Set up a Raspberry Pi to graph and monitor air quality with InfluxDB and Grafana. Have you ever been interested in monitoring the air quality in your home or outside where you live and work? This project, which we've dubbed balenaSense, will get you up and running..... Listed under: Temperature Measurement Projects

397.

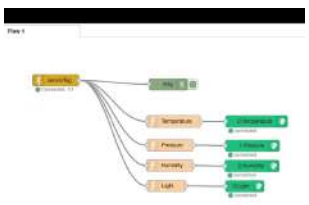
[Energy Meter Logger](#) Log your Energy Meter data using a Raspberry Pi and plot graphs of your energy consumption. Background In order to save energy it helps to know your consumption. To do this you can use Energy Meters to track the consumption of all connections in your..... Listed under: Metering - Instrument Projects

398. 

[A Voice-Activated Weather Station with LEGO and Low-Code](#) Use LEGO bricks and Hackeet Low-Code platform to build a voice-activated weather station that respects your privacy. The Project In this project, we are going to show you how to build a funny and personalized weather station that reacts to voice and respects your privacy..... Listed under: Sound - Audio Projects

399.

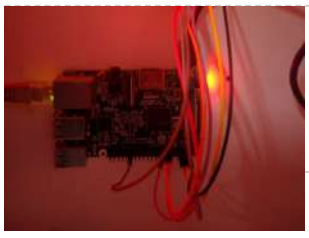
[Making a DashCam Using the Raspberry Pi Zero (pt.1)](#) This is the start of a new series where we learn how to build a dashcam using the Raspberry Pi Zero. This is the start of a new series where we learn how to build a dashcam using the Raspberry Pi Zero. This project is..... Listed under: Video - Camera - Imaging Projects

400. 

[SensorTag to Blynk Using Node-RED](#) How to merge different IoT devices and services? Node-RED provides an elegant solution. Node-RED provides an elegant solution to merge different IoT devices and services. The SensorTag acquires weather data and sends them to the Raspberry Pi through BLE (Bluetooth Low Energy).The Node-RED flow runs on the Raspberry..... Listed under: Sensor - Transducer - Detector Projects

401.

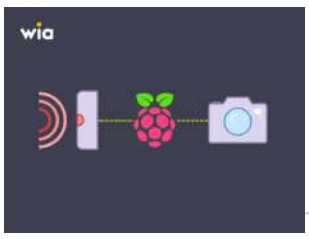
[Build a Pwnagotchi WiFi penetration tester with Pi Zero and a PaPiRus display](#) Pwnagotchi is an A2C-based "AI" powered by bettercap that learns from its surrounding WiFi environment in order to maximize the crackable WPA key material it captures (either through passive sniffing or by performing deauthentication and association attacks). This material is collected on disk as PCAP files containing any form of crackable..... Listed under: Wifi / WLan Projects

402. 

[Home Automation with Raspberry Pi 3](#) Home automation using Raspberry Pi 3B and OpenHAB. [Optional] We will be using Google Home (or Google Assistant) to control the relays. I wanted to completely automate my room. I had an old RPi-3 lying around. So I made it to my use and created..... Listed under: Home Automation Projects

403.

[QR Code on Raspberry Pi](#) Scanning QR code on Raspberry pi using ZBar. We can use our Webcam to scan QR Codes with the help of a tool such as zbar tools. To use zbar tools, all you need to do is install it by typing: sudo apt-get zbar-tools Now verify how..... Listed under: Security - Safety Projects

404. 

[Security System w/ Motion Sensor, Camera, Wia, Raspberry Pi](#) Build your own security system, using the Wia Python SDK, a Motion sensor module, a camera module, and a Raspberry Pi. Project Requirements Raspberry Pi 2 or 3 Model BMotion sensorPiCameraA Wia account. You can create one for free here: https://www.wia.io/signup3 female to female jumper cables..... Listed under: Security - Safety Projects

405.

GameMamePiBoy cramming a RPi A+ and a retro-pie installation into a classic gameboy case With the acquisition of a PiZero today, the project will now focus around using that. It's more or less the same spec as the A+ but half the size and with double the RAM..... Listed under: Game - Entertainment Projects

406.

Safe Shutdown, Control Pi GPIOs Using Google Assistant SDK Safe shutdown Raspberry Pi and control Raspberry Pi GPIO by voice using Google Assistant SDK without API.AI, IFTTT and Google Actions. The GPIO control and safe shutdown by voice are the key distinguishable features between the AIY Projects and the Google Assistant SDK. Now, with..... Listed under: Sound - Audio Projects

407.
Raspberry Pi Autonomous RC Car My first attempt at building an autonomous RC car with a Raspberry Pi 3. My wife and I were shopping at our local Big Lots store right after Christmas when I came across some marked down RC cars. I have always wanted to try and..... Listed under: Car Projects

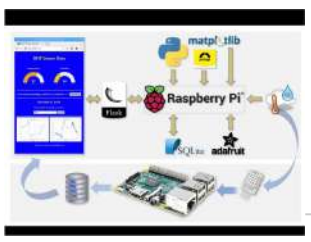
408.

Line tracking with Raspberry pi 3 python2 and Open CV The idea is to create a program in Python 2 using OpenCV 2 to find the center of a line for a Linefollower vehicle. I want use the line detection to guide a vehicle to maintain the vehicle always at the center of the line..... Listed under: Wireless projects

409.
Rhasspy Voice Assistant on MATRIX Voice and MATRIX Creator Learn how to install the Rhasspy offline voice assistant, through a simple Docker image! https://youtu.be/o6Tt-5D_uC4 Required Hardware Before getting started, let's review what you'll need. Raspberry Pi 3 or 4.MATRIX Voice or MATRIX Creator - Raspberry Pi does not have a built-in microphone, the MATRIX Voice & MATRIX Creator each have an 8 mic array -..... Listed under: Sound - Audio Projects

410.

Raspberry Pi Bartop Arcade Cabinet A home-built bartop arcade cabinet powered by a Raspberry 2B running RetroPie. Story and build Here is a project I did a while ago: after seeing some videos and reading some articles about people using a Raspberry Pi to play retro games, I decided to..... Listed under: Game - Entertainment Projects

411. 

From Data to Graph: A Web Journey With Flask and SQLite Capturing real data (RPi/DHT22), saving them in a database (SQLite), creating graphs (Matplotlib) and presenting them on a web page (Flask). Introduction: From Data to Graph. a Web Jorney With Flask and SQLite On my previous tutorial, Python WebServer With Flask and Raspberry Pi, we learned..... Listed under: Development Board - Kits Projects

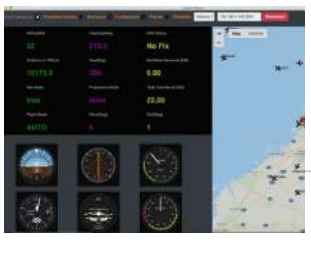
412. Direction of Arrival for MATRIX Voice/Creator Using ODAS This guide shows you how to use the MATRIX Creator or MATRIX Voice with ODAS, a library for direction of arrival, tracking, and much more. What is ODAS? ODAS stands for Open embeddeD Audition System. This is a library dedicated to perform sound source localization,..... Listed under: Sound - Audio Projects

413.
Herb(ert): A Desk Plant with Automated Irrigation I have a history of over/under watering plants. Herb(ert) combines sensor data with edge IoT logic to automate watering and stay healthy! Inspiration In our connected world there is no excuse for letting houseplants die. I have been guilty of this several times in the..... Listed under: Home Automation Projects

414.
Open CV Robot Robot that drives using computer vision and speech commands. You are about to embark on a journey, and we are excited to be part of it! Get ready to make and program your robot using Windows 10 IoT Core! And wait there is more! You..... Listed under: Robotics - Automation Projects

415.
8×8 LED Matrix display on RPi 2 with Windows 10 IoT Core Example how-to connect Adafruit Mini 8x8 LED Matrix to Raspberry Pi with Windows 10 IoT Core. Adafruit Mini 8x8 LED Matrix is simple graphical display with I2C interface. To prepare image for display is not straightforward. Every row is represented by one byte but columns are..... Listed under: LED Projects

416.
How to Measure Air Quality on OpenSensors How to measuring the air quality of the Open Data Institute using an Arduino and a Shinyei PPD-42. Introduction So, whilst thinking of a good demonstration for the Opensensors platform, we thought why not see how polluted our workplace is by hooking up a sensor..... Listed under: Sensor - Transducer - Detector Projects

417. 
Autonomous Drone / UAV Project For Plane Showing my progress in building the dashboard and flight control systems,follow up on channel and github repo to keep track: Building Ground Station for my Autonomous Rc plane. More than 20 modes and will feature experimental AI flight with RPi and carry loads of environmental..... Listed under: Video - Camera - Imaging Projects

418. DRS Enabled Smart Pantry A pantry which can automatically replenish kitchen items. Most of the times, when I want to cook something I find some cooking ingredient (onion, garlic, chili etc.) is running low. In some cases I buy wrong item such as garlic instead of onion. When I..... Listed under: Security - Safety Projects

419.

[Raspberry Pi Security Camera System with Notification] An easy way to know if someone is at the door and take picture of that person. I am using Cayenne to send me notifications every time someone is at the door and to take a picture at the same time. It will save the..... Listed under: [Security - Safety Projects]

420.

[Secret Coke Bottle SPY CAM!] Take a Raspberry Pi Zero and a webcam cram it into a Coke bottle while making it continue to appear like a normal Coke bottle! https://youtu.be/4WJaSStEmr8 Inspiration For this project, the inspiration started when I came across a mini Pi Zero camera online. The obvious..... Listed under: [Video - Camera - Imaging Projects]

421.

[Monitoring Your Broadband Connection with Raspberry Pi] Constant outages of your broadband can drive you to frustration, but you can use the Raspberry Pi, and a little bit cloud to monitor it. If there's one thing that's the same about everyone's broadband connection, is that it's slow. Usually slower than it was advertised..... Listed under: [GPS Based Projects]

422.

[Doorbell & Intercom with Snips Voice Assistant] Doorbell that integrate a Snips voice assistant to say welcome and record messages from visitor when you are not at home. The Idea Building a Doorbell including a voice assisstant to reply to visitor. The doorbell is able to speak with visitor (using TTS..... Listed under: [Sound - Audio Projects]

423.

[Win10 IOT Irrigation Controller with Moisture Sensors] Using Win10 IOT, RPi2, and XBee, measure lawn soil moisture, and automatically run irrigation as necessary. Background Large portions of the US have suffered from low water or drought conditions within the last few years. There are a large number of things a homeowner can..... Listed under: [Sensor - Transducer - Detector Projects]

424.

[Weather Station with ePaper and Raspberry Pi] In this article, I explain how I created a tabletop weather station with ePaper display, a Raspberry Pi, and an enclosure. In this article, I explain how to build a weather station with an ePaper display (like the kind you find on a Kindle, except..... Listed under: [Home Automation Projects]

425.

[DIY Raspberry Pi Indoor Outdoor Webcam] Ever want to monitor your home but don't want to buy a $100 1080p webcam? Well I did, and you can too! Ever want to monitor your home but don't want to buy a $100 1080p webcam, or just wanted to build your own? Well,..... Listed under: [Video - Camera - Imaging Projects]

426.

[Creating an IoT Server with Home Assistant and MQTT] This guide will help you set up Home Assistant. Access it from any web browser and automations. Home Assistant Home Assistant is one of the most versatile and powerful home automation platforms and it is completely open source. Once set up, it can be accessed..... Listed under: [Home Automation Projects]

427.

[Use Powershell to adjust the Adafruit 7" Touchscreen] Learn how-to enable the adafruit 7" touchscreen to be displayed correctly using powershell on a running Windows 10 IoT Raspberry PI device. Update: Public release of Windows 10 IoT Core This project has been tested with the public release and upon first use of a..... Listed under: [LED Projects]

428.

[Home Web Server] Tired of paying for hosting, or being limited by free hosting providers restrictions? I've decided to build my own web server! Story So basically I got fed up with using a free hosting provider for my person website. I kept getting resource limitation errors, doubtful..... Listed under: [Home Automation Projects]

429.

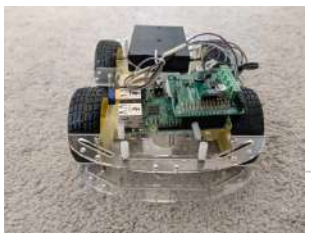
[Trail Camera] This is a trail camera that will notify you using a cellular network that there has been activity nearby. My project is a Wireless Trail Camera, I know you could buy a trail camera cheaper then making it, but wheres the fun in that. The..... Listed under: [Video - Camera - Imaging Projects]

430. [Low-cost Home Automation with Voice Control] An inexpensive open-source home automation solution for low income individuals. Background Today's h automation systems are expensive and often require the ability to install or modify existing hardware in the home. These two barriers to entry prohibit low-

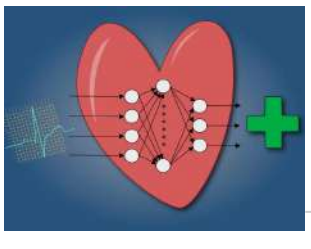
income individuals from joining the world of home..... Listed under: Home Automation Projects

431.

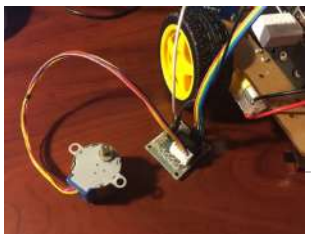
Raspberry Pi 4 Headless Setting up Raspberry Pi without HDMI cable or Ethernet Cable Hi coders, I was wandering around to find a way to program Raspberry Pi over USB only. As I am lacking an HDMI cable I searched everywhere and found something useful. And I hope it..... Listed under: Internet - Ethernet - LAN Projects

432. 

ROS Robot A simple ROS robot which can navigate with terminal commands. Introduction This project is aimed at creating a robot based running ROS which allows us to turn any generic robot hardware platform into a smart robot. https://youtu.be/nTAU5yGOXnI https://youtu.be/NKvj2queEno Hardware Installation Connect the 9V battery pack..... Listed under: Robotics - Automation Projects

433. 

Low-Cost ECG Pathology Detection with Deep Neural Networks We aim to bring proper heart care to developing countries. An early detection of these pathologies its vital for an effective treatment. The problem According to the World Health Organization, the main cause of death in the lower-middle-income countries are related to heart disease, even..... Listed under: Medical - Health based Projects

434. 

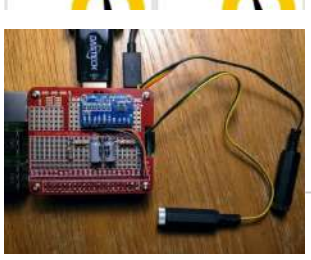
Stepper Motor from Windows 10 IoT Core It shows how to use a stepper motor, an easy way to rotate a camera, sensor and many other thing. If we are building a security system or a robot we might need to rotate a camera, a sensor or any other component. Stepper motors..... Listed under: Motor Projects

435.

Lithium Ion battery HAT for Raspberry Pi Run your Pi remotely with a 18650 Lithium Ion battery. What is the Pi18650 HAT? The Pi18650 is an add-on HAT which plugs into the 40-pin connector on the Raspberry Pi. This HAT allows you to operate your Raspberry Pi without a power cable and..... Listed under: Battery Projects

436.

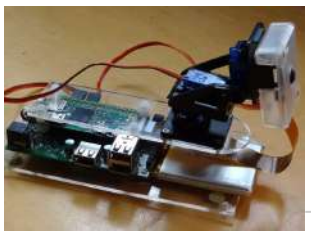
MQTT Communication Between NodeMCU and Raspberry Pi 3 B+ Using MQTT, NodeMCU, DHT22, RaspberryPi and IoT MQTT Panel to monitor temperature and humidity. Using a Raspberry Pi 3 B+ as a broker for several NodeMCU with DHT-22 sensors measuring temperature and humidity and monitor on IoT MQTT Panel App. I made the algorithm for..... Listed under: Temperature Measurement Projects

437. 

HomeEnergy – Pi Turn a Raspberry Pi into a home energy monitor with inexpensive components. Update 2018-04-21: Published code for the web application. This is functional but not as polished as I'd like it. Update 2018-04-13: The system is installed in my breaker box and collecting live data. So far,..... Listed under: Home Automation Projects

438.

FLAON Smart Home project Avalon project become FLAON project, much stable, much faster, more precise. The idea I've always loved the idea of monitoring and controlling things. The smart home concept is already a well known concept, so I've tried to build something in this direction by my own..... Listed under: Home Automation Projects

439. 

Webcam with Pan/Tilt Servos and Battery Backup Story Calin Crisan's excellent motionEyeOS is a complete Linux distribution that turns the Raspberry Pi Zero into a highly functional wireless webcam. He provides detailed instructions for installation and configuration; some are referenced here. These instructions show how to use a gadget I designed called the Solar Pi..... Listed under: Video - Camera - Imaging Projects

440.

Python/MicroPython Sensor Logger with Google Sheets A system for recording sensor values to a Google Sheet. Making use of HTTP requests to communicate between the micro-controller and the server, and utilising gspread to write data to online spreadsheet. You will need to follow the instructions on the following link to set..... Listed under: Sensor - Transducer - Detector Projects

441.

4,661 NeoPixel WS2812B Ceiling LED with RPi and 10 Fadecandy Customized ceiling screen, capable of playing videos, color picker, and color temperature using Raspberry Pi and a web-based GUI. Overview This project consists of a ceiling mount consisting of 4,661 NeoPixel LEDs powered by a multiple 5V power supply, 10 Fadecandy NeoPixel driver boards and..... Listed under: LED Projects

442.

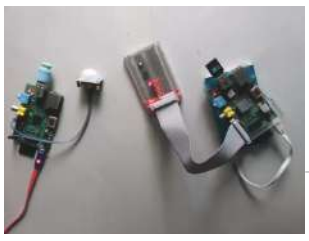
[WalaBeer Tank](#) The tank that will follow you and serve you beer. Coolness is over 9000! There are things that deep inside every man wants to have. Combining beer and tanks is one of these things! This project will be about this thing, a voice controlled tank..... Listed under: [Motor Projects](#)

443.

[Autonomous Response using Intelligence 4 Emergency Scenarios](#) Project ARIES - A system of intelligent and connected autonomous vehicles to provide an immediate response and action to emergency scenarios In Uttarkhand, Nepal and most recently in Kerala, floods have caused a lot of devastation resulting in a tremendous damage to person and property. Due to the accumulated..... Listed under: [GPS Based Projects](#)

444.

[Black Box – OBD-Pi Using Raspberry Pi](#) Our project is a black box - OPD-Pi using Raspberry Pi. In this tutorial, you will learn how to connect your Raspberry Pi to a Bluetooth OBD-II adapter and display real-time engine data to your car's aftermarket head unit! https://youtu.be/SVHaaNgbu7Q Step 1: Hardware Required: Raspberry..... Listed under: [Car Projects](#)

445. 

[Motion Controlled AWS IoT Button](#) You can use it as remote switch, anti theft beacon, counter, movement detector and so on. First, I would like to thank Amazon for announcing AWS IoT, a great environment for Internet of Things. After three weeks experiment..... Listed under: [Sensor - Transducer - Detector Projects](#)

446.

[32×32 Chained LED Matrices with Win IOT Core on RPi3](#) 128x32 pixel LED Matrix with Raspbberry Pi 3 and Windows IOT Core. Story One of our clients in food industry had a special need to display some information in real-time. We had different options to work on this project like using a 7-segments or use..... Listed under: [LED Projects](#)

447.

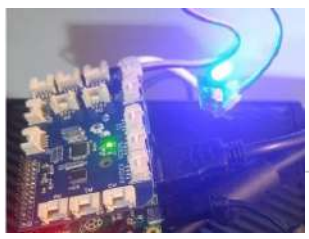
[The Fireman is never late again !!!](#) Emergency services First On Scene Drone for collecting vital information prior to arrival of response team INTRODUCTION Please take note this is an on going build so it is updated daily, Please come back often to view the new information that i regularly add. I..... Listed under: [LED Projects](#)

448.

[Mobile Remote Surveillance Camera](#) This interesting project will cover all things required for the ultimate goal of building a mobile remote surveillance camera. https://youtu.be/6FrEs4C9D-Y This interesting but complicated project will cover things from designing building a robot, to advanced configurations in linux (raspberry pi) to building an Android application..... Listed under: [Phone Projects](#)

449.

[Android Controlled Toy Using Raspberry Motor Shield](#) The terrain vehicle which is managed with raspberry pi, arduino and controlled via android software. Story At the end of the project we will manage a terrain vehicle which controlled by android device's accelemoter sensor The project contains Motor shield, raspberry pi, arduino and dc..... Listed under: [Motor Projects](#)

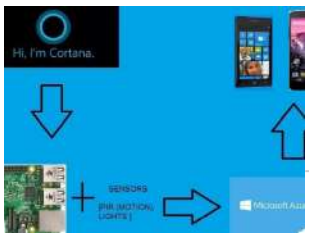
450. 

[GrovePi Windows IoT: LED Blink](#) This tutorial shows the simplest thing that you can do with the GrovePi: Blink a LED. Introduction to GrovePi with Windows IOT: LED Blink Tutorial This tutorial shows the simplest thing that you can do with the GrovePi: Blink a LED. This is a great..... Listed under: [LED Projects](#)

451.

[Azure IoT Hub nRF24L01 Windows 10 IoT Core Field Gateway](#) Windows 10 IoT Core on RPI based nRF24L01 field gateway which enables sensor nodes to securely & reliably upload telemetry to AzureIoT Hubs. Overview For school Internet of Things (IoT) projects I needed a robust field gateway for uploading telemetry data from a number "cheap n..... Listed under: [Home Automation Projects](#)

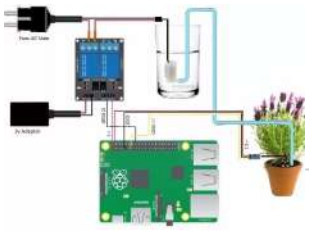
452. [Windows 10 IoT Core on Raspberry Pi 2 – Adafruit Sensor data](#) Pushing data to Microsoft Azure Event hubs from Windows 10 IoT Core with Raspberry Pi-2 connected with the Adafruit 10DOF IMU This is my first blog on Windows 10 IoT Core with Raspberry Pi-2 connected with the Adafruit 10DOF IMU (A combo board provides 3-axis..... Listed under: [Sensor - Transducer - Detector Projects](#)

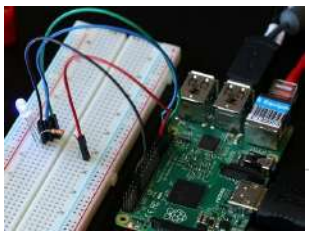
453. 

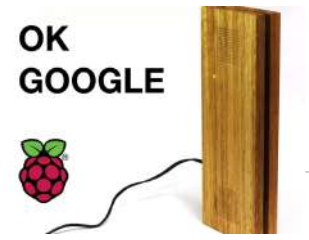
Full Home Automation System with Azure and Voice Assistance Using Rasberry Pi 2, Azure, and Voice Assistance (Windows and Android) observe how your home not only gets automated, but also self aware. OVERVIEW: We all know how Home Automation has been integrated into our day to day lives - from controlling window panes to..... Listed under: Home Automation Projects

454.

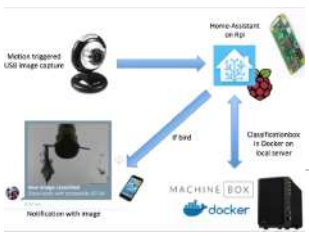
Smart Gates Identify Cars Using Raspberry Pi Description The principle of operation: The car drives up to the gates.Camera reads the car plate numbers.Checks the read number with the database; if it finds one, then it opens the gate and lets the car pass.Each car at the..... Listed under: Car Projects

455. 
Smart Home Gardening System Using Raspberry Pi Detects if there is a need to water the plants and if so, the water will be sprinkled onto the plants automatically without human help. The Problem In today's era everyone wishes to live in a green environment, and hence wishes to have at least..... Listed under: Home Automation Projects

456. 
RGB LED Sample In this sample, we will connect a Tri-color LED to Raspberry Pi 2. The LED will blink changing colors from Red, Blue, Green. In this sample, we will connect a Tri-color LED to Raspberry Pi 2. The LED will blink changing colors from Red, Blue,..... Listed under: LED Projects

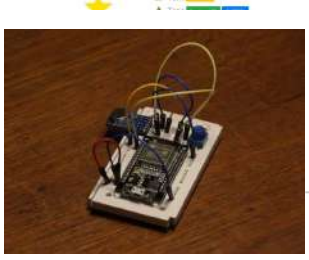
457. 

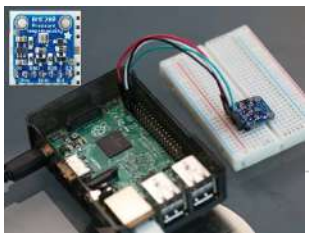
Raspberry Pi Google Assistant With Sleek Wood Box I built a DIY Google AI Assistant using a Raspberry Pi, USB Speaker and USB microphone. I'll show how to build a DIY Google AI Assistant using a Raspberry Pi, USB Speaker and USB microphone. I'll also show how to make the sleek hardwood box..... Listed under: Internet - Ethernet - LAN Projects

458. 

Motion Activated Image Capture and Classification of Birds This project shows how I automatically capture and classify images of birds visiting my bird feeder. Project Introduction Being interested in bird watching, I attached a bird feeder to a window of my flat and within a few days various species of bird started visiting..... Listed under: Home Automation Projects

459.
I Let Everyone On The Internet Control My X-Mas Decoration Control any of the 55 RGB LEDs on the tree, let Santa twerk for you, control a model railroad, or display custom text on an LED dot matrix. Story Have you always wanted anyone in the world to be able to control your X-mas decoration..... Listed under: Internet - Ethernet - LAN Projects

460. 
ESP32 Voice Streamer Use the ESP32 and the Adafruit Electret Microphone Amplifier Board to stream your voice over WiFi to your Raspberry Pi. Story There are so many things that do audio streaming out there. Smart helpers like Alexa and Google Home. And so I came to..... Listed under: Sound - Audio Projects

461. 
Weather Station V 2.0 Measure temperature, pressure and humidity in your room. Story In this project we will use the Adafruit Starter Pack for Windows 10 IoT Core on Raspberry Pi 2 kit components to create a project that uses a sensor to read the temperature, pressure, humidity and altitude. NOTE:..... Listed under: Sensor - Transducer - Detector Projects

462.

Avalon Smart Home System A permanent under development project of a smart home system built with Raspberry Pi, Arduino and Android tablets. Story The idea I've always loved the idea of monitoring and controlling things and the smart home concept is already a well known concept, so I've tried..... Listed under: Home Automation Projects

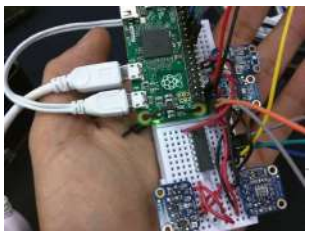
463.

Remote Heart Rate Monitor Monitoring the heart rate of somebody, and alerting somebody else when the heart rate is out of set range Story The main idea of this exercise is to monitor the heart rate of somebody, and alert somebody else when the heart rate is out of..... Listed under: Metering - Instrument Projects, Sensor - Transducer - Detector Projects

464.
Network Monitoring with AWS IoT Use Raspberry PI as network monitor box, always connected with AWS IoT/SNS to monitor network status or help power up/down device remotely. Story Background Network hacking and attack happens every seconds in the world and the loss and impact can be very large, but not..... Listed under: Metering - Instrument Projects, Other Projects

465.

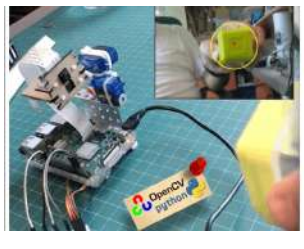
[IR remote with Raspberry PI](#) Do you want to controls your TV, DVR and more using RaspberryPi? Story In this chapter I will explain how can we control a TV or almost everything that uses an infrared remote control using Raspberry. This is part of my Home Automation project. LIRC is..... Listed under: [RFID - NFC Projects](#)

466. 

[Smart Environmental Monitoring](#) Small, and easy to use devices, to monitor temperature, humidity, noise levels, luminosity and atmospheric pressure across a city. Story Description The goal is to build a small and easy to use device to monitor temperature, humidity, noise levels, luminosity and atmospheric pressure. The idea..... Listed under: [Home Automation Projects](#)

467.

[Azure Remote Controlled Light with Windows 10 IoT Core](#) Controlling an LED remotely from a computer on the Internet. Powered by Microsoft Azure IoT Hub. Story For those who have watched the "Big Bang Theory", you would probably remember that those physicists build an Internet controlled lamp. The signal send from their laptop traveled..... Listed under: [Other Projects](#)

468. 

[Automatic Vision Object Tracking](#) A pan/tilt servo device helping a camera to automatically track color objects using vision. Story Introduction On my last tutorial, we explored how to control a Pan/Tilt Servo device in order to position a PiCam. Now we will use our device to help the camera to automatically..... Listed under: [Sensor - Transducer - Detector Projects](#)

469.

[Smart Waste Bin](#) Device for intelligent waste bin. This device integrates several sensors to supervise the state of the trash. Story Content guidelines Context Good waste management has become an essential issue for our planet. In public and natural spaces, many do not pay attention to the waste..... Listed under: [Other Projects](#), [Sensor - Transducer - Detector Projects](#)

470.

[Trading Card Scanner/Organizer](#) Create a digital inventory of your trading/collectible cards using Lego and a Raspberry Pi. Story I was really into trading cards as a kid. I recently came across a lot of Magic The Gathering cards in a box and thought to myself - I wonder..... Listed under: [Sensor - Transducer - Detector Projects](#)

471.

[Decentralized Fleet Tracking with Blockchain](#) Asset tracking is a trend, but this project intends to work in a decentralized way storing each action, event or alert in a blockchain. Story Disclaimer: I'm assuming that you are familiar with the technologies involved, such as PCB/schematic design tasks, nodejs development, soldering, and so..... Listed under: [Other Projects](#)

472.

[Remote SSH Access To Raspberry Pi 2](#) Enable remote SSH access to your Raspberry Pi 2 from anywhere, via the Yaler.net relay service. Story (From http://www.instructables.com/id/Remote-SSH-access-to-Raspberry-Pi-2/) Want to deploy a Raspberry Pi "in the field" and still be able to access it? Here is an easy way to enable remote SSH access to..... Listed under: [Other Projects](#)

473.

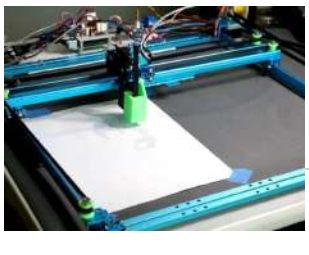
[AI Digit Recognition with PiCamera](#) Recognize digits with Raspberry Pi, Pi Camera, OpenCV, and TensorFlow. Story In this project, we are going to train a deep convolutional neural network to transcribe digits. Then we are going to use the data from the learning stage to allow the Pi Camera to..... Listed under: [Sensor - Transducer - Detector Projects](#)

474.

[Smart Traffic Light](#) Smart light that turn on at noon when anyone pass in street and turn off at morning also check its state and report if it need to be fixed. Story Overview When I was on my way on a desert road I found lot of..... Listed under: [LED Projects](#), [Sensor - Transducer - Detector Projects](#)

475.

[Alexa Hue](#) Get full voice control over your Hue lights: recall and save scenes, set timers and alarms, change colors, and trigger dynamic effects! Story Control Hue Lights with Alexa Well, you already can turn them on and off and dim them with Alexa. But this Alexa..... Listed under: [LED Projects](#)

476. 

[Plot My Face](#) Using Windows 10 IoT Core's new Lightning API, I built a Face Plotter. Story This project demonstrates Direct Memory Mapping driver and "Hybrid applications" - those which leverage Arduino libraries and XAML+C# on Windows 10 IoT Core for Raspberry Pi. This project requires that your..... Listed under: [Other Projects](#)

477.

[DIY Complete Philips Hue Home Automation](#) This project emulates a Philips Hue Bridge that is able to control multiple types of lights. Story This project emulates a Philips Hue Bridge that is able to control Hue lights (using original Hue Bridge), IKEA Tradfri lights (usign Tradfri Bridge), Mi-Light bulbs (using MiLight..... Listed under: [Home Automation Projects](#)

478.

[Android Things Word Clock](#) An Android Things-powered clock that allows the user to actually READ the time! Control it via Nearby API or through voice commands. Story What about a clock that speaks the user own language? Here it is! The core concept of this clock is that during the..... Listed under: [Clock - Timer Projects](#)

479.

[Where is my thing?](#) Story Background Do you ever get into a situation that whenever you trying to look for something but you spend very long time to look for it and still unable to find it? By leveraging RFID technology, using RFID reader and multiple RFID tags attached..... Listed under: [Other Projects](#)

480.

[MajorTom: Alexa Voice Controlled ARDrone 2.0](#) Cellular backdoor with Hologram Nova on Raspberry Pi flask-ask server-Amazon Alexa controlled. Story Motivation Our previous project with the ARDrone 2.0 helped us learn about a new project. Our current Alexa and Arduino Smart Home Challenge entryintroduced us to the skills needed to create a working demo for a..... Listed under: [Other Projects](#), [Robotics - Automation Projects](#)

481.

[Video Streaming On Flask Server Using RPi](#) Story Live video streaming server using RPi There are many ways to stream video to browsers, and each method has its benefits and disadvantages. The method that works well with the streaming feature of Flask is to stream a sequence of independent JPEG pictures. This..... Listed under: [Video - Camera - Imaging Projects](#)

482.

[Smart fridge (self-replenishing) + Amazon DRS php API](#) The smart refrigerator is a refrigerator where a lot more can be done with it than just cooling food. it can also do shopping and more. Story Idea The smart refrigerator is a refrigerator where a lot more can be done with it than just..... Listed under: [Home Automation Projects](#)

483.

[Home/Hotel Monitoring System with Automated controls](#) A cloud connected prototype to monitor and control any hotel or can be a home, The system is connected to an android application. Story Everyday we see a changing trend in technology and no matter what it has changed the way we live today and..... Listed under: [Metering - Instrument Projects](#), [Sensor - Transducer - Detector Projects](#)

484.

[JQR Quadruped Autonomous Robot](#) With a lot of inspiration from Boston Dynamics projects, I'm trying to make something great without million dollars. Story JQR Quadruped Robot is a DIY project with the main objective to build an autonomous, legged robot that will help people in many activities. The project..... Listed under: [Robotics - Automation Projects](#)

485.

[Raspberry Pi Web-Controlled Robot with Video](#) Simple Raspberry Pi web-controlled robot with video live streaming. Story gatoBot gato is the spanish translation for cat. A web controlled Raspberry Pi Zero W Robot with live video streaming. This is something I built in order to bother my cats. About Raspberry Pi Wikipedia: The Raspberry Pi is a..... Listed under: [Robotics - Automation Projects](#)

486.

[Alexa Messenger for Whatsapp](#) Text anyone at anytime without even holding your phone or type a single letter with Alexa Messenger. Story Alexa Messenger for Whatsapp Did you ever want to text your friend but you are always busy 😀 or just not comfortable with your phone small screen..... Listed under: [Other Projects](#)

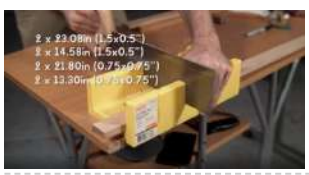
487.

[Archimedes: The AI Robot Owl](#) A wearable robotic owl familiar. Archimedes judges your emotions, via Google AIY. Story As featured in Make: Magazine! This is a robotic owl that looks around for cool people, and can tell whether you're happy or upset. If you're excited enough, he will eventually let you..... Listed under: [Robotics - Automation Projects](#)

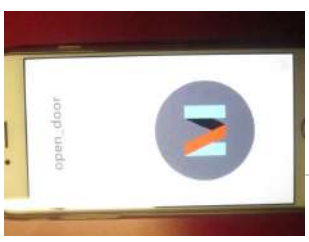
488.

[Automated Indoor Gardener](#) Never worry about dead plants again. This automated gardener never forgets to water your plants and provide artificial sunlight. Story Introduction With how busy our lives are, it's sometimes easy to forget to pay a little attention to your thirsty indoor plants until it's too..... Listed under: [Home Automation Projects](#)

489.
Pool Fill Control A system to monitor water level, temp, pH, ORP, filter pressure, electrical usage, and pump operation. Refills pool when necessary. Story The Idea Over the summer of 2015 my sons and I rebuilt our entire pool system. It started with a problem with the water..... Listed under: Sensor - Transducer - Detector Projects

490. 
Holographic Audio Visualizer with Motion Control A 3D holographic audio visualizer with gesture control and real time animations of SoundCloud playlists. Story A 3D holographic audio visualizer with gesture control can definitely spice up your party and impress your friends. This display projects an image from a monitor down onto an..... Listed under: Sound - Audio Projects

491.
Ultimate Kegerator Use the power of a Windows 10 UWP app to control and monitor a kegerator to keep your beverages cold, fresh and always on tap. Story Disclaimer: First off, this project no way promotes the use or misuse of alcohol, it is completely up to the..... Listed under: Other Projects

492. 

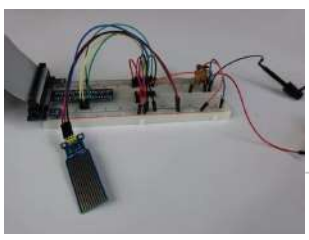
IFTTT Buzzer with IFTTT Do Button and Raspberry Pi How do build a really easy door buzzer with the DO Button App, on your phone , IFTTT, Raspberry Pi and python and the MQTT Broker Device Story This is one of three problems I had at home and I solved with an DIY internet..... Listed under: Other Projects

493.

Smart Wardrobe wardrobe which can suggest you which cloth to wear, notify you which cloth has been ignored. Story Overview People nowadays like to shopping and buy clothes. However most of the clothes will be storing inside wardrobe for long time even up to several years. Especially..... Listed under: Home Automation Projects

494.
Boost USB Current in Raspberry Pi 2 and B+ Boost USB Current in Raspberry Pi 2 and B+ Story So you've got a Raspberry Pi, but the USB output current isn't driving what you need it too? One of the newer features on the Raspberry Pi B+ and Raspberry Pi 2 Model B is..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

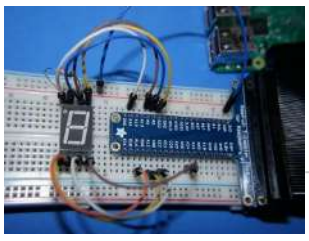
495.
DIY 3-Axis CNC VMC This is 3-axis CNC plotter/engraver based on GRBL software and 2020 aluminum extrusions. Low-cost engraving and PCB manufacturing dual side. Story Our prototype model is IoT-based thus providing it a scalable architecture to use it from practically anywhere with an internetconnection. This is a 350mm..... Listed under: CNC Machines Projects

496. 
High Sensitivity Water Sensor on MCP3008 Use the Phantom YoYo High Sensitivity Water Sensor on the MCP3008 8-Channel 10-Bit ADC with SPI interface. Introduction Background In an upcoming project I am using the MCP3008 to monitor several sensors. In this project I want to cover the details of using the Phantom YoYo High Sensitivity..... Listed under: Sensor - Transducer - Detector Projects

497.
Emotion Sensor / EEG This is an emotion sensor. It can detect stress, anger, happiness and fear. Story IMPORTANT!!!
IN FEW DAYS I WILL UPLOAD COMPLETELY PROJECT ON MY ANOTHER
PROFILE xdeyyan hackster.io/xdeyyan DATE OF UPLOAD : 20.04.2018 CET(European Time, Balkans) Emotion Sensor / EEG
THANK YOU FOR ALL THE COMMENTS FROM DOWN BELOW! PROJECT EDITED : 08.04.2018 / 15:56 CET TIME It's designed to detect a person's emotions and for use as an EEG. This project isn't finished. I will upload the finished..... Listed under: Sensor - Transducer - Detector Projects

498.

Particulater: Air Quality Monitoring for Everyone Easily measure air quality, avoid polluted areas, and improve your health and that of your community. Story Introduction Air pollution is a topic that you hear about frequently, however there are a very limited number of consumer products for the measurement of pollutants. Air quality..... Listed under: Metering - Instrument Projects

499. 
Connect a 7 segment LED to a Raspberry Pi 2 with Windows 10 7 segment led using raspberry pi and Windows 10 IoT (Csharp code) Story Finaly I received my Raspberry PI 2, just in time to make some tests with Windows 10 IoT (Internet of Things). Microsoft released Windows 10 IoT that can be installed in Raspberry..... Listed under: LED Projects

500.
Raspberry Pi Image Recognition with Alexa Voice SeeTalker tells you what it sees with the help of a Raspberry Pi computer, Microsoft image recognition and Alexa. Story Ask SeeTalker to tell you what it sees! The SeeTalker Alexa skill will snap a photo of what it sees and then call a Microsoft..... Listed under: Video - Camera - Imaging Projects

501. Hologram Nova Starter Kit New to Nova? New to Raspberry Pi? New to Python? This tutorial goes along with our kit, walking you through each step. Story tutorial is part of a kit Hologram offers: https://hologram.io/store/nova-starter-kit-for-raspberry-pi-3 Setup a Raspberry Pi - Headless Note: You can skip to

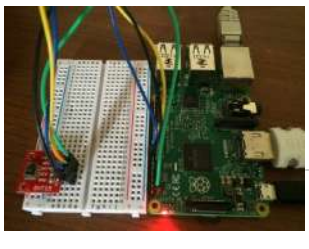
the..... Listed under: Development Board - Kits Projects

502.

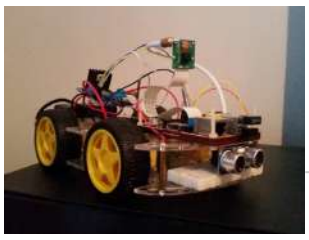
Photo Booth Powered by a Raspberry PI A photo booth powered by a Raspberry PI, great for letting people take pictures of themselves at parties, weddings, etc. Story and build Inspired by an article in MagPi magazine I decided to build my own DIY Raspberry Pi Photo Booth. Instead of building a..... Listed under: Other Projects

503.

A Raspberry Pi Thermometer you can Access Anywhere The temperature of your room, visible on a gauge on the internet. For a few bucks. Uses Python, Dataplicity and Freeboard. So you've bought a Raspberry Pi, but now what? In this tutorial I'll show you how to build an internet connected Raspberry Pi that..... Listed under: Metering - Instrument Projects

504. 

Windows 10 IoT Core and SHT15 Windows 10 IoT Core and SHT15 Sensor Story Update 08-15-2015: Project converted to Visual Studio 2015 RTM Windows 10 IoT Core and SHT15 Sensor Here is another project using Window 10 IoT. In this project I am using SHT15 Temperature an Humidity sensor. This sensor..... Listed under: Development Board - Kits Projects

505. 

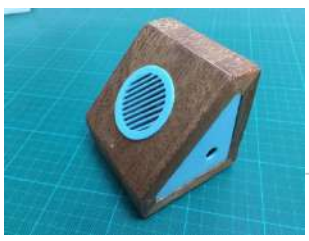
Pi Car Build a Semi-autonomous, 4WD Raspberry Pi Car with a camera stream! Story This is a guide on how to build my Pi Car! When I first discovered the Raspberry Pi I was eager to learn electronics and coding in order to create cool gadgets. However, with..... Listed under: Car Projects

506.

Energy Monitoring through a Raspberry Pi In this application we will setup a CE current monitor with a Raspberry Pi and display current readings for circuits through a web interface Story Introduction In this Article we are going to monitor the energy consumption (current) of some circuits in a home or..... Listed under: Other Projects

507.

Alexa NodeMCU Smart Home Automation With Your Own HUB In this project you can make your own personal Smart Home HUB through which you can add, modify and control all the appliances you want. HUB on Raspberry Pi First we will setup the HUB on our Raspberry Pi. Go through the steps on this..... Listed under: Home Automation Projects

508. 

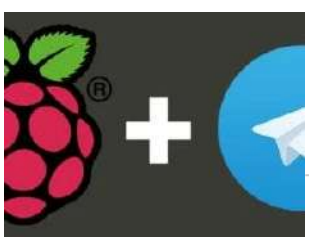
Raspberry Pi Zero AirPlay Speaker A combination of modern and classic touches in this Pi Zero AirPlay speaker. Story Looking for a new project to build around the Raspberry Pi Zero, I came across the pHAT DAC from Pimoroni. This little add-on board adds audio playback capabilities to the Pi..... Listed under: Sound - Audio Projects

509.

RPi 3 BLE Cat Door IoT cat door using a Raspberry Pi 3, Node-Red and BLE tracking tags! Story The goal of this project is to build an IoT style motorized pet door so we can control which animals can come into the house. For this we are using BLE..... Listed under: Other Projects

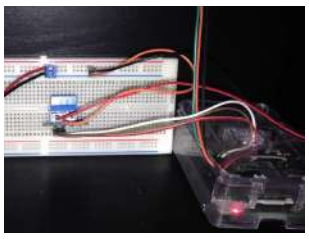
510.

Personal Mirror Mirror with Face Recognition and Personal News Story The Personal Mirror Motivation The idea to create a mirror with additional Information is not new and there are a lot of projects with instructions in the web to create such a mirror. (e.g. here: http://michaelteeuw.nl/post/80391333672/magic-mirror-part-i-the-idea-the-mirror) My idea is to..... Listed under: Other Projects

511. 

Control GPIO and Pi Camera using Raspberry Pi + Telegram App How to Control Raspberry Pi Camera and GPIO pins with Telegram APP via the Internet Story The Telegram app is taking the techie community by storm. Maybe not all your friends use it, but it has enough cool features to make it fascinating for people..... Listed under: Video - Camera - Imaging Projects

512. Temperature controlled fan Control a fan using a relay at a specific temperature threshold. Story I noticed that the media furniture where I have most of my media related devices (bluray-player,gaming consoles, etc.) was getting very warm whenever I was using one of these.I felt the urge to..... Listed under: Temperature Measurement Projects



513.

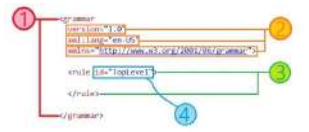
[Solar-Powered Squirrel Kam (Pi Zero W) UPDATED] Combines basic woodworking (house/feeder) with a Pi Zero W/cam powered by batteries/solar & turned on/off w/ an ATtiny85 and BH1750. Story Background I live half a mile above sea level and am SURROUNDED by animals... bears, fox, turkeys, deer, squirrels, birds. Spring has arrived and..... Listed under: [Solar energy projects]

514.

[SIGHT: For the Blind] A pair of smart glasses for the blind. Powered by Android Things and TensorFlow. Story Ever thought how is the life of a blind person, their life is full of risk. They can't even walk alone through a busy street or through a park. They..... Listed under: [Other Projects], [Sensor - Transducer - Detector Projects]

515.

[Smart Intercom] Real-Time system that allow to pass only authorized/invited people, using Face-Recognition or NFC cards. Story work demonstration Testing push-button The principle of operation: Person approaches to the intercom Looks at the camera The system compare his face with authorized people If it finds it, then..... Listed under: [Phone Projects]

516. 

[Windows 10 IoT Core : Speech Controlled Robot] Story In earlier days of computer, interaction with computer was held via punch-cards, trackball, light-gun, keyboards and even via touch screen. All of these devices requires some kind of physical contact to operate them. With decade-by-decade, new technology improves over the old one. Wireless input devices become popular..... Listed under: [Robotics - Automation Projects]

517.

[Blinds (Or Any AC Power Motor) Control] How to control several roller shutters with inexpensive relay boards (not ruining them) with physical buttons and remotely simultaneously. Story Intro Just bought a new house and wanted to automate everything, starting with the blinds. What seemed to be an easy project turned out to..... Listed under: [Other Projects]

518.

[Cheap Alexa Printer From An Old Receipt Printer] Upcycle an old receipt printer into a voice assistant/Internet of Things printer! I am a fan of recycling old tech and making it useful again. A while ago, I had acquired an old, cheap thermal receipt printer, and I wanted a useful way to re-purpose it..... Listed under: [Other Projects]

519.

[MQTT Alarm Control Panel for Home Assistant] A control panel powered by Raspberry Pi 3 using a touchscreen and Android Things to communicate with Home Assistant over MQTT. Story Overview This project is an MQTT Alarm Control Panel for pairing with Home Assistant's Manual Alarm Control Panel component or with any home automation platform..... Listed under: [Clock - Timer Projects]

520.

[Distributed Air Quality Monitoring (Using Taxis!)] Monitor air quality on a street-by-street level using Android Things, Google Cloud IoT, and taxis! Story When my family moved to Lima, Peru a few months ago, I was excited at the prospect of being able to do my daily run along the seaside. Unfortunately,..... Listed under: [Car Projects]

521.

[Smart Garden] Smart Garden is a plant environmental monitoring system. Story Inspiration I want to start gardening, but I knew I wouldn't keep up the regular schedule of watering the plants and making sure that they remain healthy. So, I recruited a micro-controller and suite of sensors..... Listed under: [Metering - Instrument Projects]

522.

[Network Monitoring using Raspberry Pi 3 and Node Red] Using the R-Pi 3 and Node Red I created a simple network monitoring appliance. Story I used a plain Raspberry Pi 3 connected to my home network to monitor some network devices and servers I am running in my lab. Monitoring Statistics I used Node-Red..... Listed under: [Internet - Ethernet - LAN Projects]

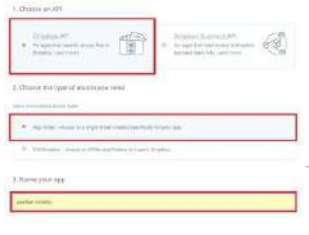
523.

[Home Smart Home] Smart home system using MediaTek Linkit, Xbee, Arduino, Orange PI and Azure Story Introduction Let's see what we need to set up a smart home system using MediaTek Linkit. Since there are lot of experts here to guide you on the hardware hookup to read..... Listed under: [Home Automation Projects]

524. [Windows IOT – Automate your power outlets] Control your home power outlet from anywhere in the world using raspberry pi, zigbee and arduino (Azure enabled) Story Introduction In this project we will see how to control the power outlets of your home natively and in cloud using raspberry pi running on windows..... Listed under: [Wireless projects]

525.

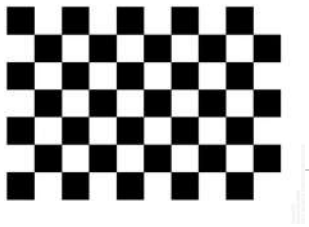
[Web-Controlled LED Animations with Raspberry Pi and Arduino] Set up your Arduino and Raspberry Pi to control lighting and animation on an RGB LED strip from your smartphone or PC. Story Project Overview Arduino Light Animation (ALA) is an Arduino library for controlling LEDs and running colorful animations with the minimum amount of..... Listed under: [LED Projects]

526. 

[Weather Monitor] Collects data and uploads it to Dropbox! Controllable through the Sense HAT joystick. Story Note: Feel free to use my code, but remember to credit me. (brendan-lewis@hackster) I have read a lot about weather stations, so I decided to make my own. The code and..... Listed under: [Sensor - Transducer - Detector Projects]

527.

[Raspberry Pi / Hologram SMS Controlled AC Power Switch] Using the Nova Hologram, IoT Relay and a Raspberry Pi, easily make a remote smart switch so you can turn devices on/off remotely. Story SMS Controlled Remote Power Switch Occasionally, our ISP modem locks up and requires a power cycle to get going again. I..... Listed under: [Development Board - Kits Projects]

528. 

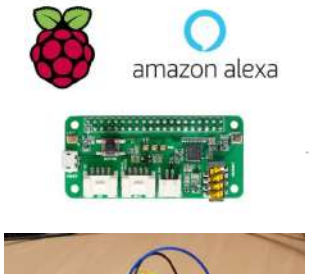
[Curved Lane Detection] Story Introduction In any driving scenario, lane lines are an essential component of indicating traffic flow and where a vehicle should drive. It's also a good starting point when developing a self-driving car! Building on my previous lane detection project, I've implemented a curved lane detection..... Listed under: [Sensor - Transducer - Detector Projects]

529.

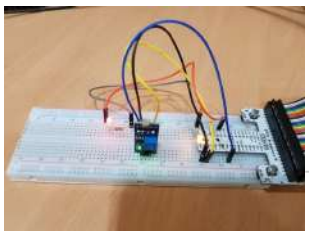
[RFID Register] Clock in and out of locations with Mifare RFID cards for an accurate register of movements on and off site locations. Story I wanted to build a connected device that had the ability to identify and record the movements of people on and off locations..... Listed under: [RFID - NFC Projects]

530.

[MiniZ: Tiny Streaming Radio Based on Classic Zenith "Cube"] Like the look and feel of vintage radio, but want Pandora, internet radio and your own music? This project is for you! Story Inspiration I used to love playing around with my Dad's big 1940's Zenith radio, tuning in to stations across America and..... Listed under: [Radio Projects]

531. 

[Build Your Own Amazon Echo Using a RPI and ReSpeaker HAT] How to build your own Amazon Echo using a Raspberry Pi and ReSpeaker 2-Mics HAT. Story Introduction ReSpeaker 2-Mics Pi HAT is a dual-microphone expansion board for Raspberry Pi designed for AI and voice applications. This means that you can build a more powerful and..... Listed under: [Sound - Audio Projects]

532. 

[Digital Light Sensor] A Windows 10 IoT core application that switches on an LED based on digital light sensor reading. Story It took me some time to figure out reading the status of the Digital Light Sensor is straightforward and it simply depends on reading the GPIO value!..... Listed under: [Sensor - Transducer - Detector Projects]

533.

[Raspberry Pi Smart Car] Use a Raspberry Pi to make your "dumb" car smarter! Story INSPIRATION I love the idea of smart cars, but it's hard for me to justify purchasing a whole new car just to get a couple of bells and whistles. For the time being, I'm..... Listed under: [Car Projects]

534.

[Intelligent Door Lock] An Alexa enabled door lock with face recognition and remote control. Story Overview Security and accessibility is the main concern in today's world. We always try to keep our house secure and at the same time we want to make our home devices easy accessible..... Listed under: [Wifi / WLan Projects]

535.

[DIY Virtual Alike NEST Thermostat with Node-RED] Create your own DIY virtual alike NEST thermostat to set and control the temperature of your home wherever you are from your desired device. Story Hi all! What´s up Makers?! This is my first project I would like to share with Hackster community! 🙂 I..... Listed under: [How To - DIY - Projects], [Temperature Measurement Projects]

536. [Alexa Voice Controlled Tello Drone] Fly a Tello drone using only your voice with Node-RED and Raspberry Pi. Story In this tutorial, I will show you how to cc a DJI Tello drone using only your voice. The drone works with Amazon's Alexa voice assistant to respond to voice-prompted commands. First Step..... Listed

under: Wireless projects

537.

[Portable media server and access point](#) Stream videos (and other media) to mobile devices/tables while on the go. Great for streaming video to iPads in a car on a long road trip! Story Background The reason for creating this project in the first place was because I hate Apple. Both my..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

538.

[Creating A Raspberry Pi Universal Remote With LIRC](#) This project allows anyone to turn a Raspberry Pi into a universal remote using LIRC (LINUX Infrared Remote Control). Story Recently I have been working on a project that would allow anyone to turn a Raspberry Pi into a universal remote. To do this I..... Listed under: Wireless projects

539.

[Raspberry Pi 2, 480*320 TFT LCD Displays Windows 10, SPI](#) PI 2, TFT LCD 480*320, SPI & Touch Screen on Windows 10 IoT, working demo, more can be found at https://www.youtube.com/c/thebreadboardca Story OK, so i think I am outdoing myself with this one ILI9488 480 * 320 LCD 65K colour display TSC2046 touch screen cotroller..... Listed under: LCD Projects

540.

[LoRa – Raspberry Pi – Single Channel Gateway – Cheap!](#) LoRa Single Channel Gateway on a Raspberry Pi. Low part count, only requires a HopeRF LoRa module (~$10) and a Raspberry Pi. Story Description Do you want to get started with LoRaWAN, but don't have a gateway near you? These instructions help you turn a..... Listed under: Development Board - Kits Projects

541.

[Autonomous Driving AI for Donkey Car Garbage Collector](#) Use a TensorFlow SSD MobileNetV2 DNN on the Raspberry Pi plus Pi Camera to build an autonomous car capable of object detection. Story This project will show how to transform a (Raspberry Pi + Pi Camera) powered RC car into one capable of object..... Listed under: Car Projects, Sensor - Transducer - Detector Projects

542.

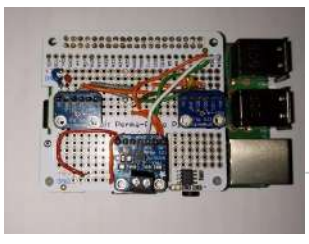
[Arduino I2C communication with Raspi 2 WIOT](#) Using Arduino to do a communication between sensors and Windows for IOT.Personally, I believe that the use of Arduino is more practical when wanting to implement an interaction with sensors, since it is already available at a time, and has a much larger number of..... Listed under: Sensor - Transducer - Detector Projects

543.

[Security Camera](#) Security camera project using Windows 10 IoT Core.This project is part of Microsoft's Hack the Home initiative, which provides makers with free, open-source components for effortless interfacing with devices and services that makers use most to hack their homes. Home security systems are a growing field of..... Listed under: Security - Safety Projects

544.

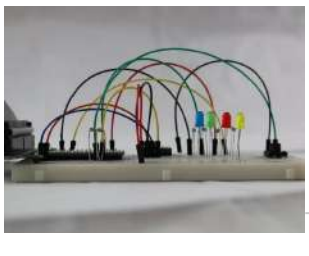
[Windows 10 IoT Core for Raspberry Pi 3 Model B+](#) The hardware and software that we need to run Windows 10 IoT Core on Raspberry Pi 3 Model B+. Story Introduction Raspberry Pi 3 Model B + is the latest new hardware released by Raspberry Pi.org, which is equipped with 1.4GHz 64-bit quad-core processor, dual-band wireless..... Listed under: Development Board - Kits Projects

545. 

[Make Your Own Google Voice HAT](#) Make your own AIY Projects Kit Google Voice HAT.Google made their AIY projects kit available to the Pi users for free through the MagPi Magazine Issue 57. However, since then, there has been no word yet on the retail availability of the kit. So to..... Listed under: Sensor - Transducer - Detector Projects

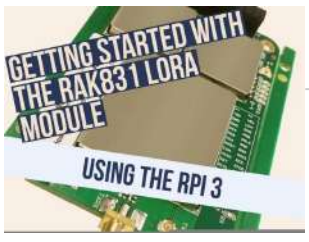
546.

[Helium Air Quality Sensor](#) A Helium-based air quality sensor and solar setup.As environmental concerns and awareness increase, I decided to build and deploy an array of wireless, self-contained, weather-resistant, solar-powered air quality sensors, also known as WSPAQS. The sensor array measures CO2 levels and VOCs. (What's a VOC, you..... Listed under: Sensor - Transducer - Detector Projects

547. 

[Sensor Telemetry 2.0.1](#) Sensor Telemetry 2.0.1 Drive temperature data to Microsoft Azure IoT Hub and monitor the data remotely from a Windows Universal application. Digitally Remastered! Story UPDATED: The Sensor Telemetry project has been digitally remastered. Updated as of May 17th, 2017 and renamed to Sensor Telemetry 2.0.1..... Listed under: Sensor - Transducer - Detector Projects

548. [Getting started with the RAK 831 Lora Gateway and RPi3](#) This project takes you through all the steps required to get you RAK 831 Lora Gateway module up and running with wifi as the backhaul. Story Introduction This step-by-step guide is aimed at developers who want to develop their very own lora gateway using



the..... Listed under: Development Board - Kits Projects

549.

Windows 10 IoT Core for Adafruit SPI Touchscreen Run Windows 10 applications on an Adafruit SPi touchscreen for Raspberry Pi. Follow instructions to install the display driver and touch. Story How it Works This project explains how to use the Adafruit PiTFT capacitive touch screen for Raspberry Pi. To support this screen, a..... Listed under: LCD Projects

550.

Home Automation system using Raspberry Pi A Home Automation system using a Raspberry Pi 2 and Windows 10 IoT Core including an App. Story Update 2: The project is still growing and a lot of new features are already implemented (like a Twitter-Client and the integration of Telegram-Bots). Please check the GitHub..... Listed under: Home Automation Projects

551.

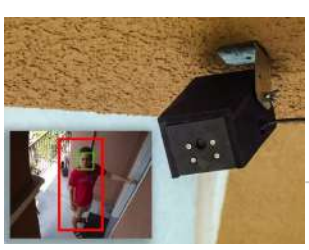
Raspberry Pi Automated Plant Watering with Website Set up your Pi to automatically take care of a house plant by reading a moisture sensor and watering when needed. Story This post starts with two facts: I have a penchant for killing plants. People in Holland grow things really well indoors. After reading about..... Listed under: Sensor - Transducer - Detector Projects

552.

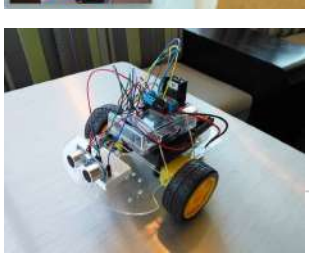
Possessed Portrait – Updated DIY jump scare portrait from scratch using Raspberry Pi 3 B, Python and AtmosFX Videos unliving portraits.It's October again and I wanted to come up with a Halloween project using a Raspberry Pi. I saw a few haunted portraits scattered here and there but none..... Listed under: Sensor - Transducer - Detector Projects

553.

Real-Time Face Recognition: An End-to-End Project We will learn step by step, how to use a PiCam to recognize face in real-time.On my last tutorial exploring OpenCV, we learned AUTOMATIC VISION OBJECT TRACKING. Now we will use our PiCam to recognize faces in real-time, as you can see below: [video width="480" height="380"..... Listed under: Sensor - Transducer - Detector Projects

554. 

Smart Security Camera IoT Raspberry Pi security camera running OpenCV for object detection. The camera will send an email with an image of any objects it detects. Story Check out this video to see a summary of the build steps and the completed camera: Building the Housing..... Listed under: Security - Safety Projects

555. 

Rover Rover Simple to get started yet infinitely expandable.There is something about robots that have captured my imagination as long as I can remember. They are my comfort zone whenever I embark on new Maker adventures; as soon as I get past the “blinking LED” project,..... Listed under: Robotics - Automation Projects

556.

Amazon Alexa Controlling a Chromecast [OUTDATED] Having Amazon Alexa, via an Amazon Echo, control a Google Chromecast via a Raspberry Pi running a Python script. Story Doing the Impossible: Google Chromecast and Amazon Alexa Ever since the release of the Amazon Echo, people have been asking for One thing. --..... Listed under: Sensor - Transducer - Detector Projects

557.

Smart Bartender Why spend lots of money going out for drinks when you can have your own smart personal bartender at your service right in your home?! Story Tired of paying $12 for a small drink at the bars? Well be tired no more. You can have..... Listed under: Sensor - Transducer - Detector Projects

558.

Windows IoT: Facial Recognition Door Build an automated door that unlocks itself using facial recognition.Home security systems are a growing field of projects for Makers. A self-built system is not only less expensive than a bulky professional installation, but it also allows for total control and customization to suit your..... Listed under: Sensor - Transducer - Detector Projects

559.

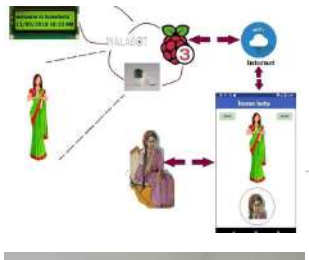
Walabot Mobile Trigger Use mobile phone to config Walabot and define actions by sending trigger to IFTTT or turn on relays.Walabot can apply to many applications. But to adjust Walabot parameters (Arena, angle and threshold value to detect) is quite a tricky part.Walabot Trigger can help..... Listed under: Phone Projects

560. Walabot Touchpad Walabot Touchpad A low profile solution that can turn any surface into a touchpad for your laptop.Imagine using a book, a table, or a wall as a touchpad. Combined with projector technology, you can replicate touch screens on any surface. This project aims to bring..... Listed under: Sensor -

Transducer - Detector Projects

561.

Nox – A House Wandering Robot (ROS) Nox is a nice (and time-consuming) robot which uses SLAM (ROS) with a Kinect to navigate in its environment.Nox is a differential-drive robot built using ROS, Raspberry Pi and Arduino. I started the project as a robot base with basic navigation I could then use..... Listed under: Robotics - Automation Projects

562. 

HomeBeta: Safety Device for Lonely People! A HomeBeta safety device based on IoT to know and address people coming home without the need for a person to be present. Story Story of HomeBeta What is the main use of HomeBeta? 1. Get to know and address people coming to home through a digital..... Listed under: Security - Safety Projects

563.

Roomberry Surveillance Robot: Roomba + Pi Zero + Camera Roomberry is a surveillance robot based on Roomba using a Raspberry Pi Zero W and a camera module.Years ago I started doing some tests to control a Roomba remotely using an Arduino One with a RN-VX WiFly module. Last month I decided to revitalize the idea but..... Listed under: Robotics - Automation Projects

564.

Toilet Tracker (Powered by Walabot) Toilet tracker can tell you either the toilet is clean or not. It also shows either it is engaged or not. Story Introduction Have you ever found a dirty toilet especially in public place? It is very common in my place. Some people forget to..... Listed under: Sensor - Transducer - Detector Projects

565.

Industrial IoT Gateway (Part II – Android Things-Based) An industrial IoT Gateway using Android Things. Part II: Modbus TCP/RTU implementation. Story About. This is the continuation work on the Industrial IoT Gateway project using Android Things. Here you can find the Modbus implementation and further details. If you are not familiar with..... Listed under: Raspberry Android

566.

UWP Controlled Wireless Netduino Car Build a wireless Netduino car with UWP control.Netduino is an impressive hardware platform that runs applications built with.NET MicroFramework, which is quite easy for C# and.NET enthusiasts to build IoT things. In this project, a UWP controlled wireless Netduino car is designed based on Netduino..... Listed under: Wireless projects

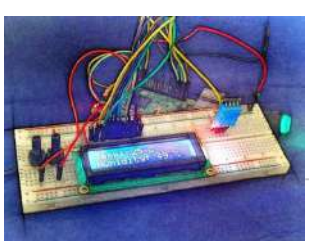
567. 

Exhibit: The Primal Display Exhibit: The Primal Display This very simple protip connects an LCD to a Raspberry Pi to display any data you need, like readings from a temperature sensor. Story Introduction LCD is a very useful add-on to any project. This very simple protip connects LCD to Raspberry..... Listed under: Sensor - Transducer - Detector Projects

568.

Building a Sensor Network for an 18th Century Gristmill Monitoring 100 year old factory processes are hard, but it gets easier, safer and more reliable with a Network of nRF24L01 RF transmitters. Story The modern factory process relies heavily on digital technology to monitor different parts of the facility. With digital technology, factories have..... Listed under: Sensor - Transducer - Detector Projects

569.

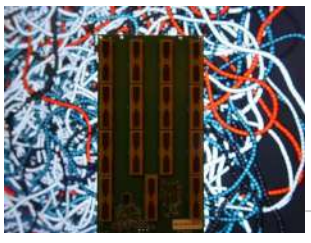
Android Things Dungeon Adventure Game A one-dimensional dungeon adventure Game built using an LED strip, an accelerometer/gyro sensor and a Raspberry Pi 3 running Android Things. Story Why we built it Liverpool MakeFest is a family-friendly event celebrating low level technologies, hardware, hacking and making. We participated with a stand..... Listed under: Game - Entertainment Projects

570.

Walabot Powered Smart Camping Safety Device The idea of this project is building a camping safety device based on Walabot and Raspberry Pi. Story Getting Started with Walabot Introduction See through walls, track objects, monitor breathing patterns, and more using the power of radio frequency with the Walabot! [gallery size="large" ids="17273,17274,17275"]..... Listed under: Security - Safety Projects

571.

GoPiGo v2 with Windows IoT Improving on the Window 10 IoT project for Raspberry Pi 3.This project is an extension of the CSharp project provided by Dester Industries on GitHub https://github.com/DexterInd/GoPiGo .There were a few gliches for my GoPiGo2 and some features that I wanted to have working. Things used in..... Listed under: Robotics - Automation Projects

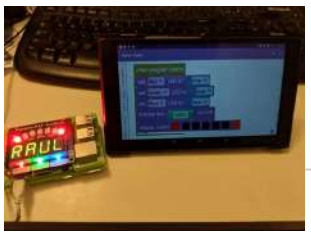
572. 

[Walabasquiat: An Interactive Generative Art Installation!](#) Walabasquiat is an interactive generative art installation using the Walabot 3D imaging sensor, Raspberry Pi, and Android. Story Idea ? ? In the mid-1990s, William Latham amazed the world with his Organic Art PC application and screensavers - introducing the public to bizarre, other-worldly forms rendered using..... Listed under: Sensor - Transducer - Detector Projects

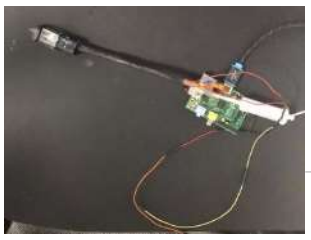
573.

Easy Start into the World of IoT with MQTT MQTT is a messaging protocol for the IoT. In this example, we show how quickly you can get up and running without a single line of code! Story The Internet of Things is getting everywhere - so more important it is to understand the principals..... Listed under: Sensor - Transducer - Detector Projects

574. Smart Lock A smart Lock solution with mobile clients and RasPi server. Story Concept that describes workflow An ordinary electromagnetic door lock is used as a standard solution in many office buildings. It is normally closed, and in order to open it, you should use either..... Listed under: Security - Safety Projects

575. 

Beret Beret is an educational project to program the Rainbow HAT on Android Things using a visual language built on Blockly. Story Beret is an educational project to program the Rainbow HAT on Android Things with a visual language built on Blockly (which is a library..... Listed under: Raspberry Android

576. 

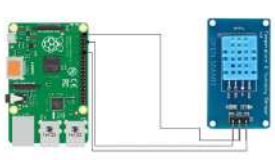
UW-Makeathon: Gastric Cancer Screening Device Low cost imaging and fluid sampling device for gastric adenocarcinoma screening. For East Asia with high prevalence and poor resources. Story Team and Intro We are a team of 2 medical students and one undergraduate. We are rookie makers and hackers. Thank you for reading about our..... Listed under: Medical - Health based Projects

577.

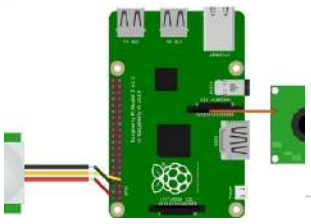
Pocket Pi Attempt to make a Pocket Pi made with parts I had laying around. Story Reasoning. I've seen some really good Portable-Pi builds such as Ben Heck's Portable Pi and stuff like this and thought I'd try one out myself using parts I have laying about as a quick mid-week..... Listed under: Other Projects

578.

Raspberry Pi Amateur Radio Digital Clock Build a 12/24 hr UTC digital clock using low-cost TM1637 4-digit displays and a Raspberry Pi Zero W. Story Overview Amateur Radio Operators (aka HAM Radio) use 24 hour UTC (Universal Coordinated Time) for much of their operation. I decided to build a digital clock..... Listed under: Radio Projects

579. 

Raspberry PI Based IoT Project Connecting DHT11 Sensor The goal of this tutorial is to enable you to capture and send data to cloud from your Raspberry PI Based IoT Project Connecting DHT11 Sensor. Story Tutorial on Connecting NodeMCU to Thingsio.ai Cloud The Raspberry Pi 3 Model B is the earliest model of..... Listed under: Sensor - Transducer - Detector Projects

580. 

Raspberry Pi Home Security System with Camera and PIR Sensor Detecting motion with PIR sensor and sending the Raspberry Pi Camera image as email. Things used in this project Hardware components [gallery ids="17076,17077,17078"] Software apps and online services gmail account ssh connection Story I have make recently a new project and I thought it would..... Listed under: Sensor - Transducer - Detector Projects

581.

Cellular IoT: Smart Garbage Can Our Smart Garbage Can is equipped with sensors that can monitor the level of Garbage in your can and alert if it needs removal. Story What Did You Create? Our smart garbage sensor was created with a Raspberry Pi Zero, some sensors, and lots of..... Listed under: Sensor - Transducer - Detector Projects

582.

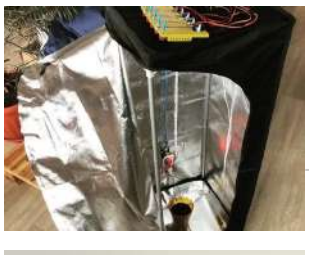
The Dragonfly Wings The dragonfly was a collaboration between many many people. These wings are all that remain after it was burnt at Burning Man... Story [gallery columns="2" size="large" ids="17029,17030"] The dragonfly was a Burning Man project created in my backyard by Richerd Chan, Elya Le, and a..... Listed under: Game - Entertainment Projects

583.

Rapid Headless WiFi Connection to a Raspberry Pi BerryLan is an app for Raspberry Pi entry level fans. It's a tool that helps you with the Raspberry WiFi setup. Story Intro: Rapid Headless WiFi Connection to a Raspberry Pi With BerryLan BerryLan is a software tool for Raspberry Pi entry level fans. It's..... Listed under: Wifi / WLan Projects

584.
[Scary IoT Pumpkin with Motion-Triggered Servo] Pumpkin with smart LED strip, PIR motion detector and servo motor to scare even more people. It's wireless and easy to control with Node-RED. [video width="900" height="674" mp4="https://projects-raspberry.com/wp-content/uploads/2018/11/output_Tt6kKFnYZX.mp4" autoplay="true"][/video] Story So what do I expect from it? It must be interactive and react to motion,..... Listed under: LED Projects, Motor Projects

585.
[Petoi Nybble] Hi there, This is Rongzhong from Pittsburgh. Eight months after my first post on OpenCat, I have quite a lot to update. Most importantly, I'm going to launch my first kitten on Indiegogo on Monday, Oct 22nd! The kitten's name is Nybble. Links will be posted..... Listed under: Robotics - Automation Projects

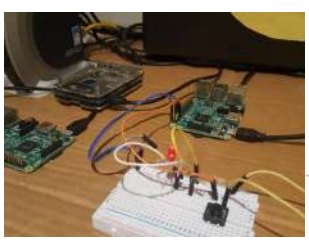
586. 
[CrowdFarming] A fully automated box with the sensors, switches, camera, and Messenger bot for growing lettuce. We've created a grow box for growing lettuce with a bunch of sensors and switches, and a camera, of course, because everything becomes better if you can livestreaming it. That's..... Listed under: Medical - Health based Projects

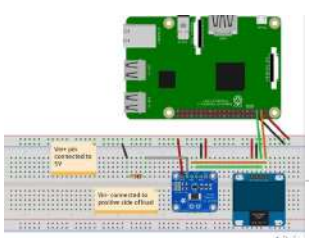
587.

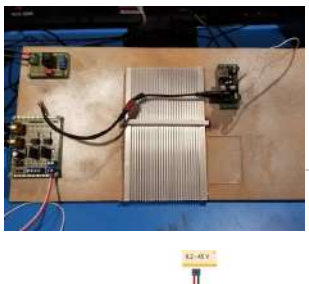
[UW-Makeathon Bio-View: A modular bioreactor for cell culture] Multichamber real-time imaging device for cell cultures under different conditions. For: Isthmus Engineering Award, Best Project Award. Story Bio-View: Project Goals and Insight Real-time imaging of live cells under physiological conditions (5%CO2 atmosphere under 37 degrees celsius) provides valuable insight towards better understanding of stem..... Listed under: Other Projects

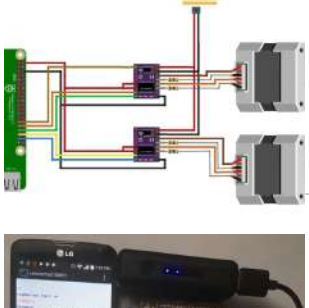
588.
[UW-Makeathon: Space Auto Sorter for Sustaintability] Using visual recognition and machine learning for the sorting of potential 3D-printable materials in space. NASA OTW, Best Pr., Rookie, Isth Story As we move forward with space exploration, it is important to reduce our carbon footprint. 3D printing in space is a more efficient..... Listed under: Medical - Health based Projects

589.
[Control Your Smart Home with Mails] A smart home offers a lot of possibilities. If you want to access via the Internet, there are still some risks. Story A smarthome offers a lot of possibilities. Today, almost everything can be interconnected in this context, providing more convenience, quality of living,..... Listed under: Phone Projects

590. 
[Desired State Configuration for Circuits] Blinking an LED using a Domain Specific Language applied through a Module Twin to a Docker container running Johnny 5 on a Raspberry Pi. Story Overview: Azure IoT Edge allows for intermittent connected devices to obtain desired properties through "Module Twins." These twins can..... Listed under: Development Board - Kits Projects

591. 
[DIY Power Logger Using I2C & Python] Make your own power logger for electronics that you use in the house using INA219 chip, SSD1306 OLED display, Raspberry Pi 3, and Python. Story The drive for this project was the inspiration from (my opinion) a well known YouTuber, which presents electronics circuits,..... Listed under: How To - DIY - Projects

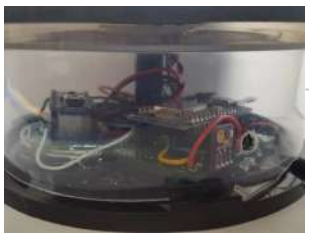
592. 
[UW-Makeathon: Fully Automated Watering System] A simple application of cooling plate to copndence water from air Story General Idea: Our project is Fully Automated Watering System (FAWS). The essential idea is to build an automatic IoT system which hydrates potted plants by condensation of water from air. A thermometric..... Listed under: Home Automation Projects

593. 
[DRV8825-Stepper-Motor-Driver-on-RPi-3-Win10-IoT] Windows IoT Core on RPi 3 running two stepper motors using DRV8825 stepper motor drivers. There are two examples to use DRV8825. Things used in this project Hardware components [gallery size="medium" ids="16338,16339,16340"] Story Connect two DRV8825 to RPi. No.1: GPIO26 to DIR, GPIO19 to..... Listed under: Motor Projects

594.
[Portable Hacking Station RPI Zero W (Like Watch Dogs)] Station to perform WiFi network audits, using Raspberry Pi Zero W and Raspberry Pi 3, with connection from the BT or mobile data cell phone. Story A station to perform WiFi network audits, using Raspberry Pi Zero W and Raspberry Pi 3, with connection..... Listed under: Wifi / WLan Projects

595.
[R2D2pi] R2D2 toy shell brought to life using a Raspberry Pi Zero W. Story My daughter got an R2D2 toy believing it was electronically controlled, just to find out that it was only an empty shell. She was very disappointed, so I said I could probably..... Listed under: Robotics - Automation Projects

596. [KatLight – The Coolest IoT Wonderlamp] An IoT lamp with gesture seonsor, temperature sensor, and multiple light effects. Story Into For a very special wor I needed a very special and unique present. Something really cool. How about a NeoPixel lamp, that can be controlled with a smartphone.And why not adding.....



Listed under: LED Projects

597.

Alexa-Enabled Touchscreen "Tablet" I built an Raspberry Pi-powered Alexa device with a screen (to complement my Compost Professor project). Story Overview A few years ago, I made the Mystic Mirror - a magic mirror with Alexa built in. I also made a display last year for my Compost Professor project. Full disclosure..... Listed under: Phone Projects

598.

Kuman TFT 3.5 RetroPie 2018 Story Like Manuel said Understanding that many people have problems configuring their Kuman TFT display on the Raspberry Pi together with RetroPie, I have decided to make this step-by-step of how to install the Kuman TFT 3.5" display which you can connect directly to the..... Listed under: Development Board - Kits Projects

599.

Google Launches AI Platform That Looks Remarkably Like A Raspberry Pi Google has promised us new hardware products for machine learning at the edge, and now it's finally out. The thing you're going to take away from this is that Google built a Raspberry Pi with machine learning. This is Google's Coral, with an Edge TPU..... Listed under: Bluetooth Projects

600.

Raspberry Pi based IoT gateway offers optional cellular, Zigbee, Z-Wave, or LoRa Newark Element14 and Avnet announced a Raspberry Pi based "SmartEdge Industrial IoT Gateway" with 2x Ethernet, WiFi/BT, CAN, serial, and optional Zigbee, Z-Wave, or LoRa. Avnet, which last year launched the Zynq UltraScale+ based 'Ultra96 96Boards CE SBC, announced plans for the Avnet SmartEdge Industrial..... Listed under: Wifi / WLan Projects

601.

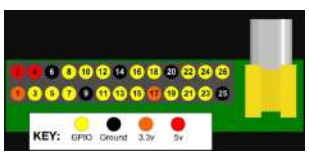
Coke Vending Machine with Bitcoin and Lightning Network A Coca-Cola machine accepting Bitcoin via the Lightning Network. Story The project is for study purposes. The objective is to demonstrate the sales automation process using Bitcoin and the Lightning Network. Hardware: Raspberry Pi 3 Model B; Display 7" Official Touch Screen Para..... Listed under: Other Projects

602.

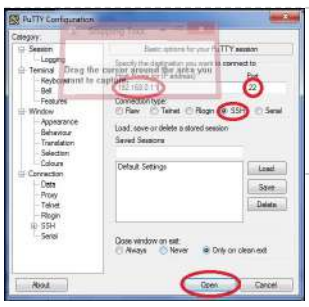
ANAVI Play pHAT Put your Raspberry Pi to work: with ANAVI Play pHAT you can make it an IoT hub during the day and a retro gaming machine during the night! Story ANAVI Play pHAT is a super simple, low cost, open source hardware add-on board for Raspberry..... Listed under: Game - Entertainment Projects

603.

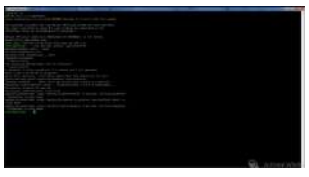
IoT Car This project was done to create an understanding of IoT and how one can step into it. Story Introduction This project is going to help the newbies understand Internet of Things (IoT) and how they can start working on this. For anyone, this term..... Listed under: Car Projects

604. 

Led Blinking using Raspberry Pi – Python Led blinking is one of the beginner circuits which helps one to get acquainted with GPIO pins of Raspberry Pi. Here we use Python language to write the code for blinking Led at one second intervals. Components required One led 100 ohm resistor Jumper cables..... Listed under: LED Projects

605. 

Accessing Raspberry Pi through SSH SSH stands for Secure Shell. It is a secure channel created over an insecure network. The channel consists of a server and a client. This channel uses public key cryptography and can be used for secure transmission of passwords, remote log in, command execution etc..... Listed under: Internet - Ethernet - LAN Projects

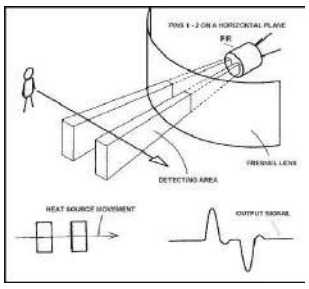
606. 

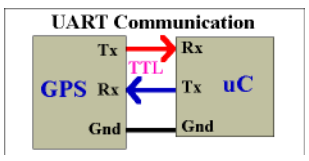
Using Raspberry Pi through VNC Contents 1 Setup VNC server on RaspberryPi 2 Accessing through VNC 3 To Automate the above Process on Boot Virtual Network Computing (VNC), is a graphical desktop sharing system used to remotely control a computer's desktop from another computer. It uses Remote Frame Buffer Protocol (RFB). It transmits..... Listed under: Internet - Ethernet - LAN Projects

607.

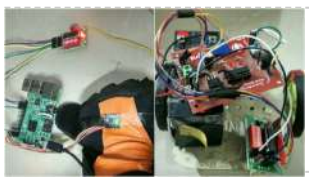
Using Switch with Raspberry Pi – Python Contents 1 Raspberry Pi GPIO Pin Out 2 Pull Up and Pull Down 2.0.1 Pull Down 2.0.2 Pull Up 3 Circuit Diagram 4 Python Programming I hope that you already go through our tutorial, LED Blinking using Raspberry Pi. Detecting switch status is one of the basic step in learning Raspberry Pi GPIO operations..... Listed under: LED Projects

608. Interfacing HC-SR501 PIR Motion Sensor with Raspberry Pi Contents 1 Working of PIR sensor HC-SR501 1.1 Adjustment 2 Circuit diagram 3 Python Program 4 Output All living beings radiate energy to the surroundings in the form of infrared radiations which are invisible to human eyes. A PIR (Passive infrared) sensor can be used to detect these passive radiations. When..... Listed under: Sensor - Transducer - Detector Projects



609. 

[Using UART on Raspberry Pi – Python](#) Contents 1 Freeing up UART pins on Raspberry Pi GPIO 2 Using Python 2.1 Installing pySerial 2.2 Example Program UART stands for Universal Asynchronous Transmitter / Receiver, a popular serial communication interface which provides full duplex communication between two devices. The term universal means that transmission speed and data format are..... Listed under: [Other Projects](#)

610. 

[Gesture Controlled Robot Using Raspberry Pi](#) Have you ever tired of controlling everything with buttons? Thought of controlling something with simple hand movements by sitting on your lazy couch? If yes, then you are at the right site. In this tutorial we are going to control a robot driven by two..... Listed under: [Robotics - Automation Projects](#)

611.

[LIVE CAMERA STREAMING RASPBERRY PI – MOTION SETUP](#) Raspberry Pi is a handy little computer that is used by hobbyists and techies all alike. Due to its compact size, powerful processor and less power consumption it can be used for anything and anywhere. In this tutorial, I will show you how you can..... Listed under: [Robotics - Automation Projects](#), [Video - Camera - Imaging Projects](#)

612.

[RASPBERRY PI WIFI ROBOT CONTROLLED FROM ANDROID SMART PHONE](#) Let us build a robot that can be controlled using your mobile phone wirelessly over WiFi, Yes; a WiFi Robot using Raspberry Pi. Here, I will be using an App RootSaid – WiFi Command Center to send UDP commands to the listener (robot). The listener accepts the..... Listed under: [Robotics - Automation Projects](#), [Wifi / WLan Projects](#)

613.

[MANAGE MULTIPLE RASPBERRY PI USING MOBILE PHONE](#) Raspberry Pi Raspberry Pi is small credit card sized, light weight and compact computer available which is used by both professions, hobbyist and of course hackers alike. Raspberry Pi 3 B is the newest version of Raspberry Pi family. This mini computer can do (almost)..... Listed under: [Wifi / WLan Projects](#), [Wireless projects](#)

614.

[RASPBERRY PI HOME AUTOMATION](#) Let us build a home automation system that can control electrical appliances such as lights, fans, gates etc suing our mobile phone from anywhere around the world. All you need is a Raspberry Pi, some relays and an android phone. Lets get started. Components Required..... Listed under: [Sensor - Transducer - Detector Projects](#)

615.

[NEW RASPBERRY PI 3 MODEL B + FEATURES AND PURCHASE](#) Raspberry Pi is small credit card sized, light weight and compact computer available which is used by both professions, hobbyist and of course hackers alike. Two years ago, Raspberry Pi 3 Model B was released which was the first 64-bit member of the pi family,..... Listed under: [Development Board - Kits Projects](#)

616.

[MATRIX VOICE ALEXA RASPBERRY PI EASY SETUP](#) In this tutorial, I show you how to set up MATRIX Voice Alexa in your MATRIX Voice/Creator Device. Before going into this, it would be good if you know what a MATRIX Voice is and what it can do. Click Here to know more about..... Listed under: [LED Projects](#)

617.

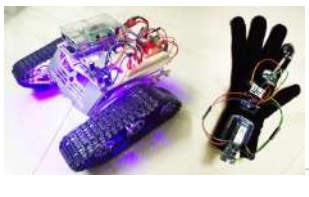
[MATRIX VOICE ALEXA ROBOT USING RASPBERRY PI](#) In the previous post we showed you how to create a home automation system using MATRIX Alexa. Now we have decided to take it to the next level. He tinkered around with the code and made a Robot that can be controlled via MATRIX Alexa;..... Listed under: [Robotics - Automation Projects](#)

618.

[MATRIX VOICE GOOGLE ASSISTANT – MATRIX VOICE PROJECT](#) In the last post, we build a Robot that can be controlled via Amazon Alexa using MATRIX Voice installed in a Raspberry Pi. In this tutorial, we will install and setup MATRIX Voice Google Assistant. Yes Google Assistant using your own MATRIX Device and Raspberry Pi. MATRIX Voice..... Listed under: [Raspberry Android](#), [Sensor - Transducer - Detector Projects](#)

619.

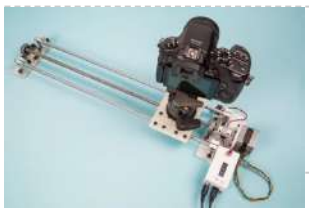
[MATRIX ALEXA HOME AUTOMATION – MATRIX VOICE/CREATOR & RASPBERRY PI](#) So what all things we have now? A A Raspberry Pi, A MATRIX Voice, Alexa configured to work with MATRIX Voice and IFTTT. What to do next? How about some home automation? In this post, I will show you how to set up a Matrix..... Listed under: [Home Automation Projects](#)

620. 

[HAND GESTURE CONTROLLED ROBOT WITH WIRELESS SURVEILLANCE](#) Welcome to our new DIY series – Spinel Crux – A DIY Advanced Hand Gesture Control Robot using Raspberry Pi for Wireless Surveillance Project. Yes, of course, building and tinkering with a DIY robot is fun. In this series, we will build a Raspberry Pi Rover Robot which can..... Listed under: [Wireless projects](#)

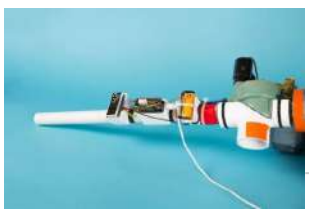
621.
[How to Check and Calibrate a Humidity Sensor](#) How accurate is your humidity sensor? Find out with this project. Humidity sensors are commonplace, relatively inexpensive, and come in many different varieties. Too often, we check the datasheet, use them with an interface, and (as long as the values “look reasonable”) we accept the..... Listed under: Sensor - Transducer - Detector Projects

622.
How to Generate a High-Precision Waveform Using a DAC and a Custom PCB In this article, we’ll develop firmware that will serve as the basis for high-precision, high-speed signal generation. I recently designed an arbitrary waveform generator (AWG) PCB that is built around a C8051F360microcontroller and a TxDAC from Analog Devices. These two ICs communicate via a parallel interface..... Listed under: Sensor - Transducer - Detector Projects

623. 
Capture Moving Timelapse Video with this Motion Control Camera Slider I’ve enjoyed capturing timelapse videos ever since I found myself in possession of a camera that could do them. I love the way they transform the mundane into the surreal, whether it’s the ability to see a transformation taking place that’s too slow to observe..... Listed under: Video - Camera - Imaging Projects

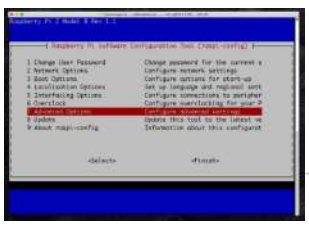
624.
Build a DIY Thermocam The basic idea of my low-cost thermal imager started with my physics class in 2010. Our teacher bought a single-point infrared thermometer, also called a pyrometer, and asked if anyone wanted to use it for a science competition later that year. A friend and I..... Listed under: Temperature Measurement Projects

625.
Program a Light-Up Felt Menorah Everyone has their own holiday traditions. Mine is trying to make an LED menorah for Hanukkah, the Jewish Festival of Lights. This year, Hanukkah starts on the night of Tuesday, December 12, and, as always, I didn’t leave myself a lot of time to play..... Listed under: LED Projects

626. 
Livestream-Interactive Confetti Cannon Ok, I’ll admit, this one is a little silly – but ever since I’ve been doing live broadcasts on the regular, I’ve wanted to increase the number of ways that live stream audiences can interact with the broadcast. I was inspired by projects like Twitch Plays..... Listed under: Game - Entertainment Projects

627.
Build a Ballistic Parachute Recovery System for Your Drone Starting on December 21, 2015, the Federal Aviation Administration (FAA) began requiring hobbyists to register their Unmanned Aerial Systems – often referred to as drones. After two days of registration, the database contained 45,000 aircraft dedicated and designed for personal use. This mandate was set..... Listed under: Robotics - Automation Projects

628.
Transform a 25-Watt Semi-Flexible Panel into a Practical Battery Charger Sunlight may be free, but transforming it into usable electricity is not. I learned this back in 1965 when I bought some surplus silicon solar cells from dealer Herbach and Rademan (now H&R Company, Inc.). Those 0.75″×0.75″ cells cost around $2.49 each or $19.30 today..... Listed under: Solar energy projects

629. 
Raspberry Pi Plex Server If you have a backup of your digital media, it’s nice to have a convenient way to play it back. Running a dedicated media server is the usual way to do this, but a computer that’s up all the time can be pretty expensive in..... Listed under: Game - Entertainment Projects

630.
Light Up the Room With These LED Earrings Before attending a fancy event, my friend asked me to create her some earrings that would light up. I needed to design something that would be lightweight, but I also wanted it to be wearable without the battery for everyday use. I started with a..... Listed under: LED Projects

631.
Gas Pump Skimmer Scanner Build a dashboard gadget that scans constantly for potential gas pump card skimmers What’s worse than gazing over your credit card statement and seeing payments you didn’t authorize? You frantically mark up your statement with a red pen before you make that call to your..... Listed under: Sensor - Transducer - Detector Projects

632.
Insta-Hue LED Party Heels I’m one of those people who is always late to a party because I can’t decide what to wear. I’m also someone who creates elaborate last-minute projects for those parties. This project — I call them my Insta-Hue Heels — was designed and created in..... Listed under: LED Projects

633. DIY Braille Embosser This project started when I met Alvino. He is originally from the Bahamas and he was born unable to see. Today Alvino has migrated to Canada where access to braille embossers is subsidized by the government, but still they’re expensive, and repairs are costly. I..... Listed under: How To - DIY - Projects

634.

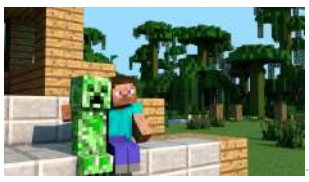
[Custom Canine Wheelchair](#) A friend needed a wheelchair for their French Bulldog at short notice. They were unable to afford the costly commercial wheelchairs available online. I rose to the occasion to design something for an adorable dog, and the results were fantastic. Murray loved her chair! I've since..... Listed under: [Medical - Health based Projects](#)

635.

[Edge-Lit LED Signs](#) Noisebridge is committed to providing a 24/7 accessible space in San Francisco available to all hackers and makers. They are losing their lease as of August 2018 and are currently fundraising to find a new location. Two things that most any hackerspace can benefit from are better..... Listed under: [LED Projects](#)

636.

[Light Up Leather Arm Braces](#) Wearable microcontrollers have found their way into cosplay, fashion, and daily wear but are usually textile based. In this Skill Builder we'll explore techniques for including leather in your wearables by examining my forearm bracer project, which uses a built-in Adafruit Gemma and RGB NeoPixels..... Listed under: [LED Projects](#)

637. 

[Craft A Minecraft Creeper Robot](#) When I wrote my new book Make: Minecraft for Makers, you know I had to include a monster Creeper project. Here's how you can build a motorized Creeper, with a metal skeleton and wooden skin. Aside from the fact that this thing most certainly doesn't blow..... Listed under: [Robotics - Automation Projects](#)

638.

[Impact Reactive Snare Drum Lights](#) [gallery columns="2" size="large" ids="15808,15809,15810,15811"] At a Less Than Jake concert I noticed that Vinnie Fiorello's drums had LED lights inside. They would periodically change colors while the roadie set up the band's gear, but stayed one solid color during the performance. Less Than Jake have..... Listed under: [LED Projects](#)

639.

[Aya](#) Aya is an interactive robot that stores your picture to recognize and interact with you. Winner of Hack the North 2017 & Best Use of AWS. Story Inspiration When we saw what Amazon did with Alexa and what Google did with home, we were sure..... Listed under: [Robotics - Automation Projects](#)

640.

[Speathe](#) Speaking Through Breathing: An intelligent communication system for the paralyzed. Things used in this project Hardware components [gallery columns="4" ids="15794,15795,15796,15797"] Software apps and online services Python react-native Story Speathe: An innovative and evolving communication method for the paralyzed who are gone speechless after paralysis..... Listed under: [Medical - Health based Projects](#), [Sensor - Transducer - Detector Projects](#), [Sound - Audio Projects](#)

641.

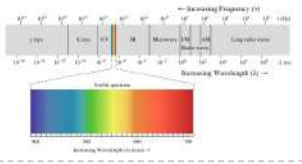
[Posture Pal with Walabot](#) Prevent neck and back pain by monitoring your sitting posture with Walabot's distance sensor and an Android app. Things used in this project Hardware components [gallery columns="2" ids="15786,15787"] Posture Pal usage and components overview Walabot with Raspberry Pi Why I built Posture Pal Millions of..... Listed under: [Medical - Health based Projects](#), [Raspberry Android](#), [Sensor - Transducer - Detector Projects](#)

642.

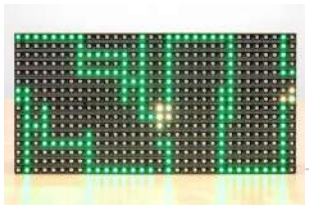
[Using pcDuino's WiFi Dongle With the Pi](#) Introduction This quick tutorial aims to show you the steps required to set up the pcDuino WiFi Dongle with everyone's favorite fiberglass-flavored development board: the Raspberry Pi (model B or model A). This WiFi dongle is a cheap solution to adding network connectivity to your Pi, if you..... Listed under: [Wifi / WLan Projects](#)

643.

[Hackers in Residence: The Sound Visualizer](#) Introduction This tutorial shows how to put together a sound visualizer that I created, during my time in the SparkFun HIR program. The end goal for the project was to have a sound reactive LED belt buckle. To accomplish the task of sound visualization, a Raspberry..... Listed under: [LED Projects](#), [Sound - Audio Projects](#)

644. 

[FLIR Lepton Hookup Guide](#) Introduction Note: This tutorial was originally written for the FLiR Lepton [KIT-13233]. However, the FLiR Lepton 2.5 with Radiometry should function the same. When our team found out that we'd be testing a Long Wave Infrared (LWIR) camera, there were two words that we couldn't stop..... Listed under: [Temperature Measurement Projects](#)

645. 

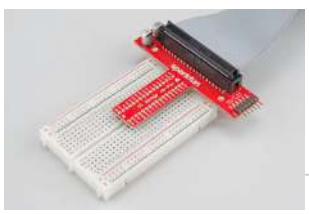
Hackers in Residence: The Sound Visualizer Pt. 2 Introduction This guide is a follow up to the first write up I did for my participation in the SparkFun HIR program. This guide shows how to setup a music visualizer for PCs/laptops. It uses an RGB LED panel to display the music visualization. It plays MP3s and..... Listed under: LED Projects, Sound - Audio Projects

646.

SD Cards and Writing Images Introduction This tutorial is designed to give you a basic understanding of SD Cards and how to write different images to the SD card of your choice. SD cards, short for Secure Digital, are everywhere you look now, from digital cameras, to phones and tablets, and..... Listed under: Other Projects

647.

Building Large LED Installations Introduction While designing the layout for the new SparkFun Emporium, I was given the opportunity to design a large LED art installation. I've helped build LED installations before, but had never had the opportunity to design one from the ground up. Thus was born the CandyBar, a 46-foot..... Listed under: LED Projects

648. 

Preassembled 40-pin Pi Wedge Hookup Guide Introduction The preassembled 40-pin Pi Wedge is the newest member in our Pi Wedge family. It's an excellent way to get those pesky Pi pins broken out to a breadboard so that they can easily be used. The Pi Wedge in a breadboard This Pi Wedge..... Listed under: Development Board - Kits Projects

649.

Raspberry Pi 3 Starter Kit Hookup Guide Introduction Heads up! The Raspberry Pi 3 Model B+ has the same mechanical footprint as both the Raspberry Pi 3 Model B and the Raspberry Pi 2 Model B. This guide will show images of the Pi 3 Model B but you can still follow along..... Listed under: Development Board - Kits Projects

650.

PiRetrocade Assembly Guide PiRetrocade Pew-Pew. Got you. The Raspberry Pi 3 has been the latest and greatest in the line of Raspberry Pi Single Board Computers. Need some inspiration for your next Raspberry Pi project? How about a retro arcade gaming kit? Kit Includes: 5x Arcade Buttons 1x Joystick 1x SD..... Listed under: Game - Entertainment Projects

651.

Bark Back Interactive Pet Monitor Shed some light (er, sound) on the elusive mysteries of your pets' antics while away from home! This Internet of Things (IoT) Bark Back project monitors and uploads the level of noise in your home to the Cloud so you can check on your beloved..... Listed under: Sensor - Transducer - Detector Projects, Sound - Audio Projects

652.

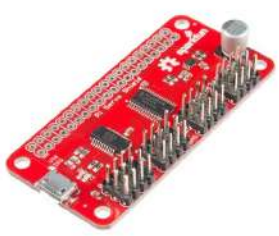
Scratch Boy UW – Makeathon Introduce kids to programming and gamedev by providing them with a personal, handheld system to execute games of their own creation. Story Our story starts with Scratch, the coding language developed in an MIT lab to introduce young people to coding. Building Scratch games allows..... Listed under: CNC Machines Projects, Game - Entertainment Projects

653.

Getting Started with the Raspberry Pi Zero Wireless Introduction The Raspberry Pi is a popular Single Board Computer (SBC) in that it is a full computer packed into a single board. Many may already familiar with the Raspberry Pi 3 and its predecessors, which comes in a form factor that has become as highly recognizable..... Listed under: Wireless projects

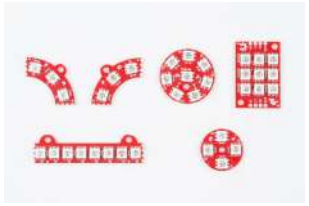
654.

Setting Up the Pi Zero Wireless Pan-Tilt Camera Introduction This tutorial will show you how to assemble, program, and access the Raspberry Pi Zero Wireless Pan-Tilt Camera. [caption id="attachment_15562" align="aligncenter" width="500"] SparkFun Raspberry Pi Zero W Camera Kit[/caption] Required Materials You'll need a microSD card, a sufficient power supply, and a micro-B USB Cable..... Listed under: Wireless projects

655. 

Pi Servo Hat Hookup Guide Introduction The SparkFun Pi Servo Hat allows your Raspberry Pi to control up to 16 servo motors via I2C connection. This saves GPIO and lets you use the onboard GPIO for other purposes. Furthermore, the Pi Servo Shield adds a serial terminal connection which will allow you..... Listed under: Development Board - Kits Projects, Motor Projects

656. Lumenati Hookup Guide Introduction The Lumenati line of LED boards is designed to give your projects an edge in their lighting capacity. Based on the APA102C addressable LED, these LEDs employ a 2-wire communication protocol consisting of a clock line and a data line. While this requires one more wire than..... Listed under: LED Projects



657.

[Qwiic HAT for Raspberry Pi Hookup Guide] Introduction This Qwiic HAT for Raspberry Pi is the quickest and easiest way to utilize SparkFun's Qwiic ecosystem while still using that Raspberry Pi that you've come to know and love. This Qwiic HAT connects the I2C bus (GND, 3.3V, SDA, and SCL) on your Raspberry Pi..... Listed under: [Development Board - Kits Projects]

658.

[Getting Started with TJBot] Introduction TJBot is a kit developed at IBM to help people get started with their Watson AI service. It comes with a friendly little robot that you build yourself, a Raspberry Pi 3, and all the parts you need to make your robot wave, blink, talk,..... Listed under: [Development Board - Kits Projects], [Robotics - Automation Projects]

659.

[Using the PSoC 6 Pioneer Board with the Pioneer IoT Add-on Shield] Introduction The PSoC 6 is the latest addition to Cypress's powerful PSoC series of processors. The PSoC 6 Pioneer IoT Add-On Shield is the development tool associated with this processor line, sporting an onboard debugger, Arduino compatible headers, CapSense widgets, and more, all tied to a PSoC..... Listed under: [Development Board - Kits Projects]

660.

[Raspberry Pi Stand-Alone Programmer] Introduction With the power of Raspberry Pi, Python, avrdude, a custom HAT with cable adapter, we developed our own spin on AVR programming that turned out pretty darn robust. In addition to creating a stand alone solution, it was a great experiment to learn more..... Listed under: [Raspberry Programmer Projects]

661.

[Remote Monitoring of Weather Using Raspberry Pi] In this Project I am going to show you how to make a Remote Weather monitoring system using Raspberry Pi3 I am using PubNub Cloud service for this,Free...which is PubNub is a global Data Stream Network (DSN) and realtime infrastructure-as-a-service (IaaS) company based in San..... Listed under: [Metering - Instrument Projects], [Phone Projects], [Sensor - Transducer - Detector Projects], [Temperature Measurement Projects]

662.

[Telemonitoring System With Raspberry Pi] Telemonitoring Telemonitoring is defined as the use of information technology to monitor patients at a distance. Telemonitoring allows reduction of chronic disease complications thanks to a better follow-up; provides health care services without using hospital beds; and reduces patient travel, time off from work, and overall costs. Telemonitoring can help..... Listed under: [Home Automation Projects]

663.

[Raspberry PI Wireless Display Receiver] In industrial automation & other areas most of the time, we want data to be viewed at control room or head office with far distance, Thats why i made Raspberry Pi Wireless Display Receiver ,As RPi made its 1oth Million sale this year on its Birthday..... Listed under: [LCD Projects], [Video - Camera - Imaging Projects], [Wifi / WLan Projects], [Wireless projects]

664.

[Raspberry Pi Zero Helmet Impact Force Monitor] How much impact can the human body handle? Whether it's football, rock climbing, or a bicycle accident, knowing when to seek immediate medical attention after a collision is incredibly important, especially if there are no obvious signs of trauma. This tutorial will teach you how..... Listed under: [Security - Safety Projects]

665.

[Setting up a Raspberry Pi 3 as an Access Point] Introduction Note: This tutorial was based on instructions found on this blog.
The Raspberry Pi 3 comes with a built-in wireless adapter, which makes it easy to configure it as a WiFi hotspot to share Internet or host your own internal web site. The first part of this guide..... Listed under: [Wireless projects]

666.

[Headless Raspberry Pi Setup] Introduction A "headless" computer is one that operates without a monitor, keyboard, or mouse.
The Raspberry Pi works great as an inexpensive computer that can help people learn to program and create fun, interesting projects (without many repercussions if you break something–just reflash the SD card!). The..... Listed under: [Other Projects]

667. [How to Use Remote Desktop on the Raspberry Pi with VNC] Introduction If you like the idea of a headless computer setup for your Raspberry Pi (i.e. one w ıt a keyboard, mouse, or monitor) but want access to the full graphical desktop, then you're in luck! By using a Virtual Network Computing (VNC) program, you

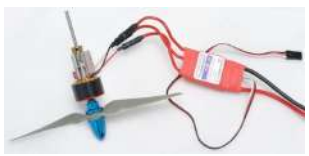
can access a..... Listed under: Wireless projects

668.

Python GUI Guide: Introduction to Tkinter Introduction Python is generally more popular as a sequential programming language that is called from the command line interface (CLI). However, several frameworks exist that offer the ability to create slick graphical user interfaces (GUI) with Python. Combined with a single board computer, like the Raspberry..... Listed under: Other Projects

669.

Using the A111 Pulsed Radar Sensor with a Raspberry Pi Introduction Experimental Products: SparkX products are rapidly produced to bring you the most cutting edge technology as it becomes available. These products are tested but come with no guarantees. Live technical support is not available for SparkX products. Does your project require high-precision, cutting-edge distance, speed,..... Listed under: Sensor - Transducer - Detector Projects

670. 

Using Wemos D1 mini to control a brushless motor with ESC and servo signals I've recently become interested in making "machines" of various sorts. I was sorting through some of my RC (radio control) plane "stash" the other day and came across various brushless motors and electronic speed controllers (ESC) like these. In RC, Brushless ESCs are usually connected..... Listed under: Motor Projects

671.

Run a K40 Laser Cutter from Your Raspberry Pi with K40 Whisperer I bought a Chinese K40-style laser cutter about three weeks ago and I've been spending quite a bit of time playing with it learning how best to use it. It's an eminently hackable design, and while mine could cut 3mm acrylic OK 'straight out of the box',..... Listed under: CNC Machines Projects

672.

How to tap a thread in acrylic Perspex, Lucite, Plexiglass using your cordless drill driver I recently bought a laser cutter (running on a Pi) and started working with acrylic (Perspex). I've sawn, routed and drilled Perspex before. It machines beautifully as long as you're not too 'greedy' with your cuts (and if you're too greedy, it cracks). In exploring the material,..... Listed under: CNC Machines Projects

673.

New Raspberry Pi model 3B+ 1.4 GHz, 330Mbit Ethernet, 802.11ac, PoE It's Pi day (if you do dates in the illogical MM/DD/YY format) so Raspberry Pi is releasing a new version of the Pi 3B. It's called the 3B+, which is logical because it has more to offer than the 3B and is also in keeping with previous..... Listed under: Internet - Ethernet - LAN Projects

674.

How Much Power Does Raspberry Pi 3B+ Use? Power Measurements Since the original Pi came out I've been interested in how much power it consumes. It's become something of a launch week tradition to publish a new chart and some data. So much so that several people ask for it on launch day. This time..... Listed under: Battery Projects

675.

Octopod: Smart IoT Home/Industry Automation Project Octopod, a uniquely shaped full automation system that allows you to monitor your industry and keep security with AI and smart RFID locks. Things used in this project Hardware components Arduino UNO & Genuino UNO Anduino Arduino MKR WiFi 1010 Either this or any other..... Listed under: Home Automation Projects

676.

LoRa gateway and node boards run on Raspberry Pi power Pi Supply is Kickstartering Iot LoRa Gateway and IoT LoRa Node pHAT add-ons for the Raspberry Pi, as well as a LoRa Node that works with the Micro:bit. An Arduino node is also in the works. Pi Supply, which has produced a variety of Raspberry..... Listed under: Wireless projects

677.

Raspbian Desktop OS on an Old Netbook Old Netbook with Windows XP Home is likely something you have forgotten about. Breathe new life into the hardware with Raspbian OS desktop. Things used in this project Hardware components Intel Netbook PC (various manufacturers) For this article, I am referencing the HP Mini 110..... Listed under: Raspberry Programmer Projects

678.

Smart Home Hub With Raspberry Pi + Homebridge + Resin OS Want to use a device that HomeKit doesn't support? Get Raspberry Pi running with Homebridge using Resin OS and change you home forever. Things used in this project Hardware components Raspberry Pi Zero Wireless Pimoroni Red/White Raspberry Pi Zero Case AC/DC Micro-B USB Adapter 2A..... Listed under: Wireless projects

679. How to Build a Raspberry Pi FM Transmitter Be it a boring afternoon, a monotonous job or a lonely long drive FM radio stations have always kept us entertained. While on the contradictory it should also be agreed that sometimes these FM stations get very boring with the RJ blabbering irrelevant stuff or.....

Listed under: Radio Projects

680.

Voice controlled Home automation using Amazon Alexa on Raspberry Pi Have you ever thought about a speaker which can be controlled by your voice!!! What if we can control our home appliances this way and make these appliances smarter? Voice assistants becoming more popular as we are heading towards an era of AI and IoT based systems. ..... Listed under: Sound - Audio Projects

681. ZeroPhone Is “Coming Soon”: A Raspberry Pi-Based, Linux-Powered Phone For Just $50 ZeroPhone is an open source, Linux-powered, $50 smartphone. It has no carrier locks, bloated apps, or data mining, and it doesn’t depend on big companies - instead, its open source hardware and software give you as much control over your phone as possible. ZeroPhone is..... Listed under: Phone Projects

682.

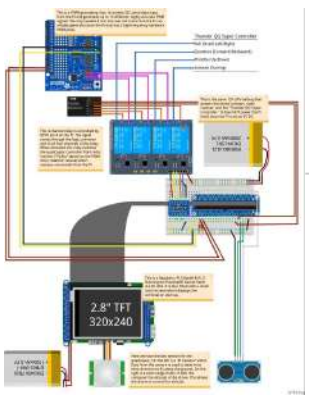
WarpPI Calculator, Step-by-step algebra calculator for Raspberry Pi. WarpPI Calculator Step-by-step algebra calculator for Raspberry PI. This project is experimental and strictly related to my calculator, designed to run on an embedded hardware. It works but many fundamental features aren't complete. If you really want to build and test it on your computer..... Listed under: Calculator Projects

683.

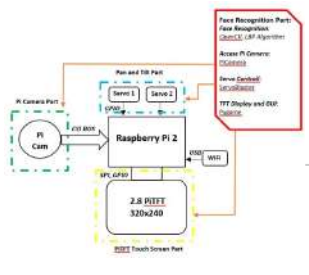
Getting started with Embedded Linux Single board computers (SBCs) have been credited with rekindling an interest in electronics across all age groups, young and old. SBCs themselves have been around for a very long time and can be found in many industrial automation systems, but it was the advent of..... Listed under: Internet - Ethernet - LAN Projects

684.

M3 Pi: Raspberry Pi OBD-II Touchscreen Car Computer Abstract There are a wide range of off-the-shelf OBD-II car computers available for purchase, but the majority of them are either prohibitively expensive or simply unreliable. Furthermore, almost all of these devices are closed-box systems that cannot be expanded or modified. As such, this project..... Listed under: Car Projects

685. 

Autonomous Quadcopter for Target Tracking Objective There is a wide range of applications for Unmanned Aerial Vehicles that have been made possible through recent advancements in technology. One application uses a quadcopter for surveillance of a region. In this project, we attempted to automate a quadcopter for tracking targets. The..... Listed under: Radio Projects

686. 

Face Recognition System Introduction Using the Raspberry Pi and some additional peripherals, we have designed and built a face recognition system. In this system there is a camera which will detect the faces presented before it and if shown one face at a time, it will track that..... Listed under: Video - Camera - Imaging Projects

687.

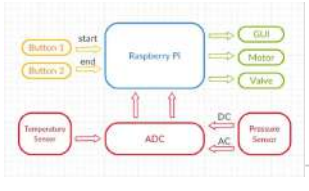
Smart Pen: Final Project for ECE5725 Introduction Nowadays, in order to gain the handwriting results, people often rely on the capacitive touch screen, stylus pen, or other similar devices. They are functional and precise, but not always flexible. Our project combines Raspberry Pi with IMU to build a product that..... Listed under: Robotics - Automation Projects

688.

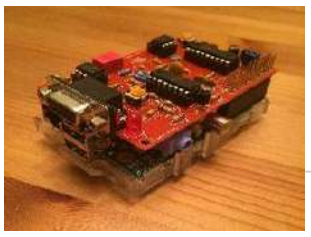
Raspberry Pi Car HUD Objective The goal of our project is to use the Raspberry Pi and create a touchscreen enabled Heads Up Display (HUD) for an automobile. The HUD would display useful, real time information through an easy-to-ready GUI onto a PiTFT screen. Some example information includes the..... Listed under: Car Projects

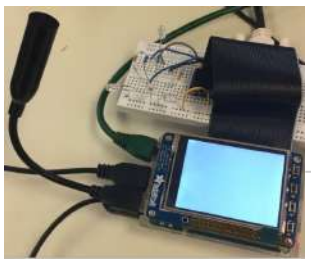
689.

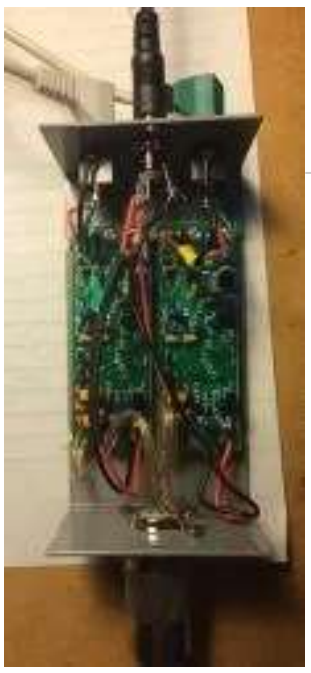
N5DUX Raspberry Pi Ku-Band Outernet Receiver Project Description Outernet is a service intended for providing web-based information to individuals without access to the web. It is a startup computer and still going through much revision. The service will surely morph over time as interest and finances grow, but for now it's an..... Listed under: Wireless projects

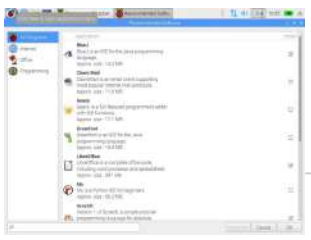
690. 

Raspberry Pi Controlled Health Monitor System Introduction Health is always an important concern. However, the health of modern people is always interfered by various potential but dangerous factors, such as high blood pressure, and abnormal heart rate. High blood pressure, also called hypertension, increases the burden of the heart to pump..... Listed under: Medical - Health based Pr s

691. 
N5DUX Raspberry Pi ISS iGate Project Description This project is an APRS iGate for ARISS program's digipeater aboard the International Space Station. I have a 2m FM radio tuned to 145.825 MHz. As the ISS passes over my location, the radio passes the received signal from the ISS to a Terminal..... Listed under: Radio Projects

692. 
Voice Controlled Car Objective The main objective of this project is to exploit the “IoT” potential of Raspberry Pi computer to control a Remote Car using the Voice Commands. The Raspberry Pi with a Microphone connected to it will receive the Voice Commands and will control the Remote..... Listed under: Car Projects

693. 
N5DUX Raspberry Pi WebSDR Receiver Project Description I created my first Raspberry Pi WebSDR receiver in the Fall 2014. I had long intended to setup a WebSDR station, but grad school and work can really keep you busy. The first receiver on the air worked well until a suprise electrical storm..... Listed under: Radio Projects

694. 
Raspberry Pi gets its own app store with latest OS update The latest release of the official Raspbian OS will make it easier to find the best software for the credit card-sized board. A large factor in the runaway success of the $35 Raspberry Pi is how easy it is to get started with the tiny..... Listed under: Raspberry Android

695.
N5DUX Raspberry Pi Generic Setup Description This is a howto document created as a basis for all my other Raspberry Pi Progjects. Here, I list the basic hardware needed as well as the steps necessary to create your own basic Raspberry Pi setup. This is just the beginning of several..... Listed under: Memory - Storage Projects

696.

Physical Computing – Scratch 2.0 for Raspberry Pi Story This is my 3rd tutorial with a focus on Scratch and Physical Computing. Regarding this topic, I have already published: Physical Computing - Scratch for Arduino, where as the name says, I explored how to use Scratch and Arduino to interact with the physical..... Listed under: LED Projects

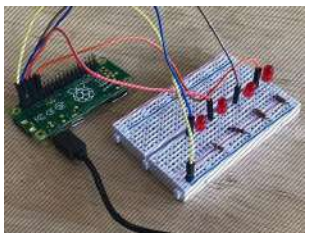
697.
Flexible Smartwatch Description This project aims to build a thin, flexible smartwatch. It's wrap-around display and touchscreen will allow it to display more data at a glance than current devices. Besides telling time and displaying notifications, the watch will feature pulse rate, blood oxygen, and step sensors..... Listed under: Clock - Timer Projects

698.
SIMULATION RASPBERRY PI EMULATOR FOR WINDOWS 10 USING QEMU In this article, you are going to learn how to run Raspbian on your Windows 10 PC. If you really enjoy this article, consider checking out my TechWizTime YouTube Channel. And for an awesome source of Raspberry Pi Accessories, check out my Raspberry Pi Amazon..... Listed under: Raspberry Programmer Projects

699.
$35 NanoPi K1 Plus is a Raspberry Pi-like computer with twice the RAM (and a different CPU) FriendlyElec’s latest single-board computer looks like a Raspberry Pi 3 and has a lot of the same features, including a 40-pin header, WiFi, and a quad-core ARM Cortex-A53 processor. But while the Raspberry Pi 3 Model B+ uses a 1.4 GHz Broadcom BCM2837 system-on-a-chip, FriendlyElec’s NanoPi..... Listed under: Development Board - Kits Projects

700.
Inspection Drone with Walabot Capability Over the past year I have been working on various projects for making commercial inspection drones practical and safe, Here are a few links from my other projects. I refer you to them for the discussions regarding the requirements for commercial inspection work. NXP Flexio..... Listed under: Robotics - Automation Projects

701. Building an API for Your Raspberry Pi Zero W Wouldn’t it be interesting to have an API to control our hardware, like Arduino or Raspberry Pi? We now have the tooling to make this possible and easy. Having an API for our hardware allows us to remotely control and/or monitor our hardware with code..... Listed under: Other Projects



702.

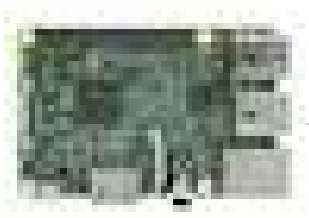
[Controlling Widgets using Raspberry Pi](#) This demonstration features the uLCD-220RD-Pi, a display module pack for the Raspberry Pi. The uLCD-220RD-Pi is made up of a uLCD-220RD 1.38″ round TFT LCD display module, a 4D Serial Pi Adaptor, and a 5 way interface cable, for quick and easy connection to a..... Listed under: [LED Projects](#)

703.

[Using Serial Communication (RS232 protocol) – Example 4](#) Introduction Communication plays an important role in distributed applications. It allows devices in a system to communicate with each other in order to exchange information or coordinate to perform some tasks. Depending on the communication requirements of the application such as wired / wireless, short..... Listed under: [Sensor - Transducer - Detector Projects](#)

704.

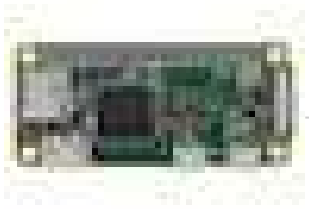
[8 superb — and cheap — Raspberry Pi alternatives](#) As great as the Raspberry Pi is -- and let's be honest, all of the devices in that family are excellent, especially for the money -- it's not the only such device available to buy, and some of the rival systems are arguably better as..... Listed under: [Wireless projects](#)

705. 

[Smart Parking System](#) Hardware components: Raspberry Pi 3 Model B × 1 Arduino Mega 2560 & Genuino Mega 2560 × 1 HC-SR04 × 3 Software apps and online services: Samsung IoT ARTIK Cloud for IoT Google Maps Arduino IDE STORY Finding a free parking lot in a congested..... Listed under: [Car Projects](#)

706.

[TalkingPi: voice control module for Raspberry Pi](#) A new Raspberry Pi extension module called Talking Pi, manufactured by Joy-it and marketed by Conrad Business Supplies, serves as an extension to allow the control of lights, individual power sockets or devices by voice command. Talking Pi is equipped with a bracket holding 433-MHz..... Listed under: [Sound - Audio Projects](#)

707. 

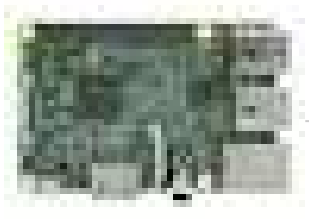
[Google Voice Assistant Using Asterisk PBX on Raspberry Pi](#) Hardware components: Raspberry Pi Zero Wireless × 1 VOIP (SIP) Phone such as Grandstream GXP1620 Alternately, use a VOIP Softphone for PC (see below) × 1 Software apps and online services: VOIP Softphone Need either a VOIP physical phone or Softphone Alternate VOIP Softphone Only..... Listed under: [Sound - Audio Projects](#)

708.

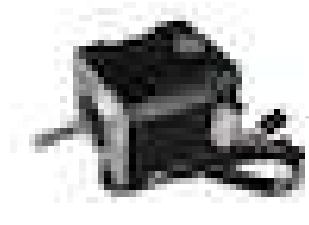
[Raspberry Pi rival: Android friendly, 4K-capable Asus Tinker Board gets upgrade](#) Asus has souped up its Raspberry Pi rival, the Asus Tinker Board, adding on-board storage it says will make the board even faster. The new Asus Tinker Board S is broadly similar in spec to the original, but adds 16GB of eMMC storage, which Asus promises will boost..... Listed under: [Raspberry Android](#)

709.

[The best accessories for your Raspberry Pi](#) Vivek Nanda has been a technical editor and content manager for over 20 years at B2B magazines in the electronics industry. He enjoys creating contextual content, crafting content strategy and working with online product development teams. In 2017, The MagPi Magazine – the official Raspberry..... Listed under: [Sensor - Transducer - Detector Projects](#)

710. 

[Dewalt Raspberry Pi Development Laptop](#) Hardware components: Raspberry Pi 3 Model B × 1 Breadboard (generic) × 1 Arduino LCD Screen × 1 Pi cobbler × 1 OpenBuilds 12V/29A Power Supply × 1 1N4007 – High Voltage, High Current Rated Diode × 1 STORY Ok let me start by..... Listed under: [LCD Projects](#)

711. 

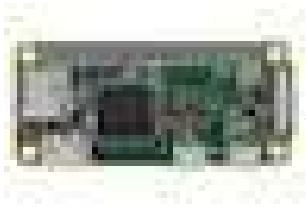
[Game Changer: Xbox 360 Into 3D Printer!](#) Hardware components: OpenBuilds NEMA 17 Stepper Motor × 1 3D Printer MK8 Direct Drive Extruder 0.4mm / 1.75mm for Prusa i3 × 1 Raspberry Pi 3 Model B × 1 Software apps and online services: Arduino IDE Marlin Firmware Hand tools and fabrication machines: dremel..... Listed under: [Game - Entertainment Projects](#)

712.

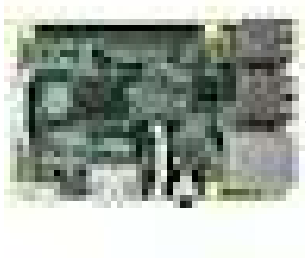
[Wavepad: Gesture Controlled Raspberry Pi Music Player] Hardware components: Raspberry Pi 3 Model B × 1 Speaker × 1 Ultrasonic Sensor × 1 Photodiode × 2 IR LED × 2 Resistor 1k ohm × 18 Resistor 10k ohm × 2 Resistor 100 ohm × 1 Single Turn Potentiometer-10k ohms × 2..... Listed under: [Sound - Audio Projects]

713.

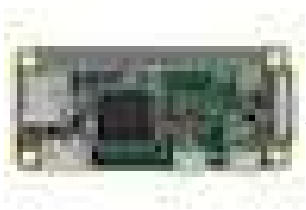
[Candy Dispenser with Google Assistant] 3d Hardware components: Particle Photon × 1 Arduino Mega 2560 & Genuino Mega 2560 × 1 Raspberry Pi 3 Model B × 1 Speaker: 3W, 4 ohms × 1 Voice HAT for Raspberry Pi × 1 Mic Array × 1 Arcade Button and Micro Switch..... Listed under: [Other Projects]

714. 

[Pi Camera Doorbell with Notifications!] Hardware components: Raspberry Pi Zero Wireless × 1 Raspberry Pi Camera module × 1 RF receiver × 1 Wireless doorbell (RF) × 1 Software apps and online services: Home Assistant Rpi-rf python module MQTT Telegram STORY Introduction There are some pretty cool smart doorbells..... Listed under: [Video - Camera - Imaging Projects]

715. 

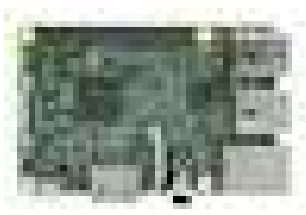
[Smart Mirror with Home Automation using chats] Hardware components: Raspberry Pi 2 Model B × 1 PC Monitor with VGA Cable × 1 Wifi Receiver × 1 Two way mirror acrylic sheet × 1 5v Relay Module × 1 Jumper wires (generic) × 1 Software apps and online services: Raspbian OS Telegram..... Listed under: [Home Automation Projects]

716. 

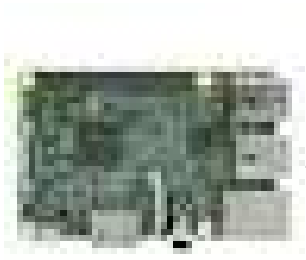
[Pigeon: A 3D-Printed, Pi Zero W-Powered Cloud Camera] Hardware components: Raspberry Pi Zero Wireless × 1 Raspberry Pi Camera module × 1 STORY Pigeon is a simple cloud home surveillance camera project that uses the new Raspberry Pi Zero W single board computer ($10). It also uses a custom designed 3D printed..... Listed under: [Video - Camera - Imaging Projects]

717.

[Connected Studio Warning Light] In this Instructable, we're going to build a very modern take on an iconic piece of studio equipment: a smart on-air warning light that responds to the Robin room reservation system. This project started life as a practical solution to our occasional need for quiet..... Listed under: [Wifi / WLan Projects]

718. 

[Nabaztag Gets a New Life With Google AIY] Hardware components: Nabaztag Not sold anymore, but maybe on Graigslist or eBay? × 1 Raspberry Pi 3 Model B × 1 Google AIY Voice HAT They come as a free gift with The MagPi #57, or you can subscribe to get a notification when they..... Listed under: [LED Projects]

719. 

[A LoRaWAN "The Things Network" Gateway for Windows IoT Core] Hardware components: Dragino LoRa/GPS HAT × 1 Dragino LoRa Shield × 1 Dragino LoRa/GPS Shield × 1 Raspberry Pi 3 Model B × 1 Software apps and online services: Microsoft Windows 10 IoT Core STORY This tutorial describes how to build, install and..... Listed under: [Internet - Ethernet - LAN Projects]

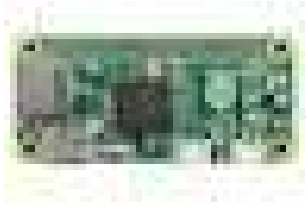
720.

[Internet Streaming Radio with Google AIY] Hardware components: Raspberry Pi 3 Model B × 1 Software apps and online services: Google AIY Projects STORY The Google AIY Voice Kit is a great way to get started with using voice commands to control a Raspberry Pi. As of 5/13/2017, the Google..... Listed under: [Sound - Audio Projects]

721. [AssistantPi: Bring both Google Assistant and Alexa to your Raspberry Pi] Hardware components: Raspberry Pi 3 Model B × 1 Generic Aux Speaker × 1 USB Microphone × 1 Software apps and online services: Amazon Alexa Alexa Voice Service Google AIY Projects Hand tools and fabrication machines: Generic USB Keyboard for Setup STORY Meet AssistantPi!..... Listed under: [Sound - Audio Projects]

722.

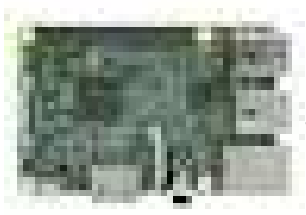
[Pre-Collision Assist with Pedestrian Detection – Honda Civic](#) Hardware components: Walabot × 1 Raspberry Pi 2 Model B For Walabot, RPI v3 is preferable. × 1 Android device Samsung Galaxy A3 or better. × 1 Intocircuit 26000mAh High Capacity Power Castle can use any way to power the RPIs on the move. ×..... Listed under: Car Projects

723. 

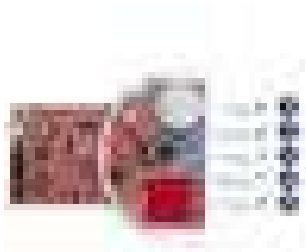
[FabDoc – Version Control Tool for Makers](#) Hardware components: Raspberry Pi Zero × 1 Raspberry Pi Camera module v2 × 1 Goggle × 1 Small Power Bank × 1 USB cable Electronic Components / Misc. Electronic Components × 1 STORY Description We are all facing a lot of work of documentation beyond..... Listed under: Video - Camera - Imaging Projects

724.

[Tracking TV Stand](#) Hardware components: Raspberry Pi 3 Model B × 1 Walabot × 1 Unitek USB3.0 4-Port Hub × 1 Power Sonic Model PS-640 F1 6 Volt 4.5 AmpHr Battery Supply × 1 Servo (generic) Personally modified Futaba S3003 for continuous rotation. If using a different brand..... Listed under: LED Projects

725. 

[Windows 10 IoT Core – Reading Heart Rate Pulses](#) Hardware components: Microchip MCP3008 × 1 Raspberry Pi 3 Model B × 1 SparkFun Heart Rate Pulse Sensor × 1 Breadboard (generic) × 1 Jumper wires (generic) × 15 Software apps and online services: Microsoft Windows 10 IoT Core Microsoft Visual Studio 2015 STORY..... Listed under: Sensor - Transducer - Detector Projects

726. 

[Baby Room Watcher](#) Hardware components: Cypress PSoC Analog Coprocessor Pioneer Kit × 1 Raspberry Pi 3 Model B × 1 ElecFreaks EFCom Pro module × 1 Raspberry Pi Camera module × 1 Software apps and online services: Cypress PSoC Creator openHAB STORY Project Description The purpose of..... Listed under: Security - Safety Projects

727.

[Antique Radio into an Airplay Speaker](#) My father-in-law is a musician and a lover of mid-century modern design. I have an obsession with tinkering. Somewhere in that mix lies the perfect gift and the perfect challenge. After taking a couple of trips to antique stores and reading a few Intructables, I..... Listed under: Radio Projects

728.

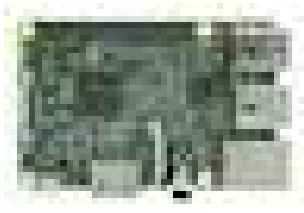
[Pulse Train HAT for Raspberry Pi Mecanum Bot Example](#) Hardware components: Raspberry Pi 3 Model B Tested with Raspberry Pi 3 × 1 Pulse Train Hat × 1 Xbox Controller × 1 Software apps and online services: Microsoft Windows 10 IoT Core STORY PTHAT Mecanum Bot Example using Instant Commands With this example,..... Listed under: Internet - Ethernet - LAN Projects

729.

[DHT Tiny Breakout for the Raspberry Pi](#) Hardware components: Atmel ATTiny85 × 1 DHT22 Temperature Sensor × 1 DHT11 Temperature & Humidity Sensor × 1 SparkFun Tiny AVR Programmer × 1 Adafruit 4.7K Ω Resistor × 3 Adafruit 10K Ω Resistor × 1 Adafruit 100 Ω Resistor × 1 Adafruit Diffused Blue..... Listed under: Temperature Measurement Projects

730.

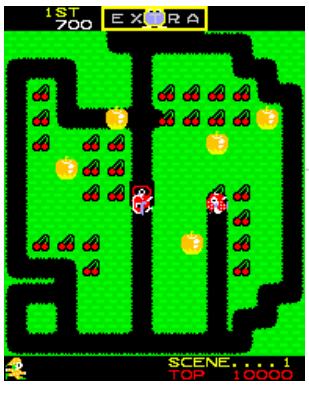
[Raspberry pi wifi router prank](#) Introduction Do your neighbors leech off your wifi? Got a raspberry pi? We're going to build a wifi router that redirects users to a website of our choice regardless of what URL they request. In our case, we're going to redirrect users to People of..... Listed under: Wifi / WLan Projects

731. 

[Mystic Mirror Alexa voice-enabled smart mirror] Hardware components: Raspberry Pi 3 Model B × 1 Squid Button × 1 RGB LED Bulb × 1 AYI Portable Mini Speaker × 1 Computer Monitor I used a refurbished compaq monitor ($35 from a discount electrinc store); it had a VGA connection, so I..... Listed under: [Sound - Audio Projects]

732.

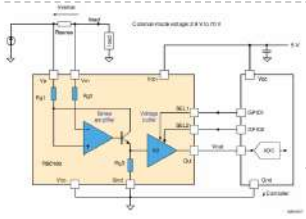
[How To Hack An Apple Time Capsule With A Raspberry Pi] Introducing the "Pi Capsule." It's currently the only Apple Time Capsule you can plug into your TV...,does this make it an Apple TV? 😉 Ok, ok, let's say you have an old Apple Time Capsule laying around that doesn't work anymore... (there's quite a few..... Listed under: [Wifi / WLan Projects]

733. 

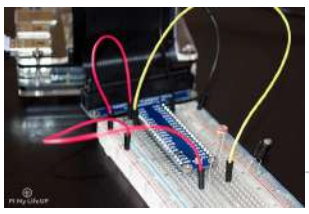
[Raspberry Pi Arcade Games] I grew up in the dawn of arcade games, and living at the coast meant that I had access to a couple of decent arcades where I could play all the classics as they came out - Space Invaders, Galaxian, Defender, Moon Cresta, Galaga, Phoenix,..... Listed under: [Other Projects]

734.

[Raspberry Pi Projects, WhatsApp on Raspberry-pi] WhatsApp is an instant messaging application originally developed for iPhones. It quickly emerged as a cross-platform messenger application and is now the most popular instant messaging application. Due to projects like Android for x86 and other raspberry-pi projects, a number of users were using WhatsApp..... Listed under: [Phone Projects]

735. 

[Sensing current on the high side] As EDN's Design Ideas editor, I see a range of design submissions, from good, to not so good. A recent DI I turned down for several reasons included a high-side current sense circuit with implementation problems. This got me thinking about the different ways to..... Listed under: [Other Projects]

736. 

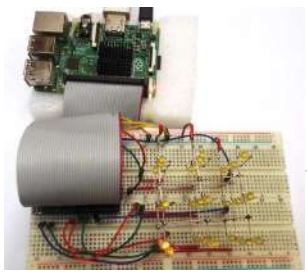
[Raspberry Pi Light Sensor: A Simple LDR Tutorial] In this Raspberry Pi light sensor tutorial I show you how to correctly connect the photo resistor sensor up to the GPIO pins. Lastly I show you how it can be used in a simple python script so you're able to gather and use the..... Listed under: [Sensor - Transducer - Detector Projects]

737.

[Build a Raspberry Pi Webcam Server in Minutes] This Raspberry Pi Webcam Server tutorial will take you through on how to have your very own Webcam that is visible on a webpage. If you're after more of a security like system then check out the Raspberry Pi security camera tutorial as it features..... Listed under: [Security - Safety Projects]

738.

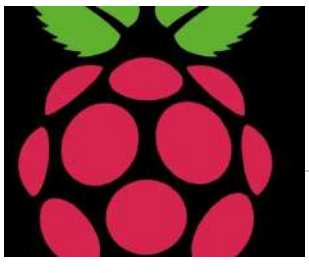
[4.5Amps Bipolar Stepper Motor driver based on TB6600] Bipolar stepper drive board described here has been designed around TB6600HG IC. The TB6600HG is PWM chopper type single chip bipolar sinusoidal micro-step stepping driver. Maximum Load 4.5A, Supply 10V to 42V DC. Features Based on Single chip and Second chip for auto half current..... Listed under: [Feature], [Motor Projects]

739. 

[3X3X3 LED Cube with Raspberry Pi and Python Program] We have created a series of Raspberry Pi Tutorials, in which we have covered Interfacing of Raspberry Pi with all the basic components like LED, LCD, button, DC motor, Servo Motor, Stepper Motor, ADC, shift Register, etc. We have also published some simple Raspberry Pi projects for beginners, along..... Listed under: [LED Projects]

740.

[DIY SWR and Power Meter] First of all, this SWR meter in this article is not exactly homebrew, as I based the circuit on the schematic in the excellent book Arduino Projects of Amateur Radio. Although I bought the book and respect the copyright of the authors I will share..... Listed under: [Radio Projects]

741. 

[Transfer MP3 songs in Raspberry Pi to Android Phone using Bluetooth] Introduction Chances are you have lots of mp3 files stuck in a PC like I do. I wanted to listen to the songs when I am out. So that's my motivation for making this instructable. Scope This instructable will show: How to install Bluetooth in..... Listed under: [Bluetooth Projects]

742. [High-End Sound with 7 Inch Touchscreen Control Based on Raspberry Pi and Max2Play] With the arrival of the new official Raspberry Pi Touchscreen, we we excited to find applications for it in our Max2Play system. Since audio applications have been one of our main focuses from the start, we immediately thought

of a combination of sound card and..... Listed under: Sound - Audio Projects

743.

Ambilight TV I have been always amazed by Philips Ambilight TV. Unfortunately they were pretty expensive, and this is why I have looked for an easy cheap solution to be able to create the same user experience. This was my first Raspberry Pi project, and it's pretty..... Listed under: LED Projects

744.

Raspberry with cam in birdhouse First of all, I'm French and I apologize for my bad English. Before to start, I drew a plan for my birdhouse in order to build it. First, you can see my youtube video here: https://youtu.be/S3MB3YABeRU After, I decided to add a camera to see..... Listed under: Development Board - Kits Projects

745.

Cheap 5 volt power adapter Every want to make a portable Pi and all you have is a 12 volt battery? Or have you made a project using a LCD with a 12 volt battery and another then another 5 volt battery for the Raspberry Pi? This instructable will show..... Listed under: Battery Projects

746.

Raspberry Pi IoT ticket printer for online stores Do you have an online store? Are you a maker? Do you want to optimize the selling process? If you answer yes to all the questions, please keep reading because this is the instructable you are looking for. Also if you say no to one..... Listed under: Internet - Ethernet - LAN Projects

747.

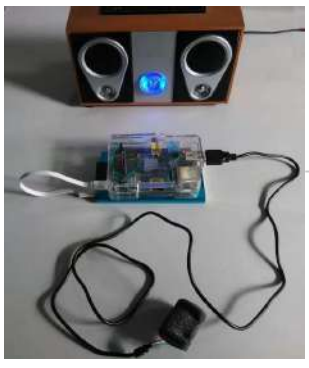
Raspberry Pi Bluetooth LE Controller for WS2812B (NeoPixels) Bluetooth Low Energy (aka BLE/Bluetooth 4.0/Bluetooth Smart) is the most recent incarnation of Bluetooth technology developed by the Bluetooth SIG (the organization that maintains the specification). This communication protocol is designed for applications where data needs to be transferred in small amounts at relatively low..... Listed under: Bluetooth Projects, LED Projects

748.

Raspberry Pi Home Automation – Control lights, computers, CCTV and more! Hey guys, first of all I'd like to introduce myself to everyone. My name is Jack, commonly known as Jackk or JackkTutorials over on YouTube where I do technology tutorials but mainly cover Hacking & Security and other useful things that you wouldn't normally know..... Listed under: Home Automation Projects

749.

The Drone Pi NOTE: THIS INSTRUCTABLE IS BEING WRITTEN This project is a quadcopter powered by a Multiwii and controlled with a Raspberry Pi 2 B. This quadcopter has a particularity because he's using 2 differents controller and he could be pilot with 2 differents devices : a..... Listed under: Robotics - Automation Projects

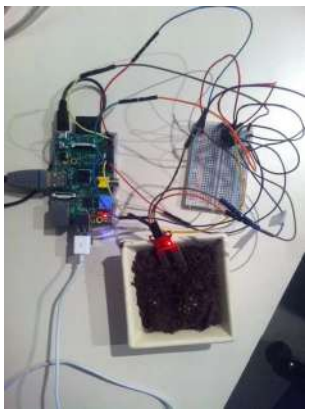
750. 

Raspberry Pi Based Wireless FM Microphone A wireless microphone is a microphone without a physical cable connecting it directly to the sound recording or amplifying equipment with which it is associated. Also known as a radio microphone, it has a small, battery-powered radio transmitter in the microphone body, which transmits the..... Listed under: Sound - Audio Projects

751.

ARUPi – A Low-Cost Automated Recording Unit for Soundscape Ecologists This instructable was written by Anthony Turner. The project was developed with lots of help from the Shed in the School of Computing, University of Kent (Mr Daniel Knox was a great help!). It will show you how to build an Automated Audio Recording Unit..... Listed under: Sound - Audio Projects

752. Analog sensor input raspberry pi using a MCP3008: wiring/installing/basic program So now that we bought the MCP3008 ADC lets get it up and running! Note: This is my first instructables submision so if something is wrong just tell me so and if you like my style leave a comment, also I'm from the Netherlands so..... Listed under: Sensor - Transducer - Detector Projects



753.

[Raspberry PI I/O Breakout cable and plugboard adaptor] This is the second is a series of Instructables aimed at documenting all the electronics-related activities that go on at So Make It; Southampton Makerspace (on the South coast, UK) Requests are more than welcome! This simple Instructable intentionally goes into way too much detail,..... Listed under: [Development Board - Kits Projects]

754.

[Toy Truck Powered by Raspberry Pi] Here is a great way to impress your fiends when your out an' about at the park, by modifying a broken toy Truck/Car with a Raspberry Pi and Adafruit's DC & Stepper Motor Pi HAT , to existing electronics . And for the controller to..... Listed under: [Robotics - Automation Projects]

755.

[DIY cheap glove controller and propeller car] HI there, In this instructable I'll show you how to make the cheapest glove for controlling your robots or any other Arduino or raspberry pi based projects and for demonstration example I'll also include how a little tutorial how I made car controlled by this..... Listed under: [Robotics - Automation Projects]

756.

[Reading a Rotary Encoder from a Raspberry Pi] I wanted to attach a knob to my Raspberry Pi to act as a volume control for my MPD based jukebox. Traditionally volume control devices are implemented with potentiometers acting as inputs for amplifiers. A potentiometer is a hardware device with a knob or a..... Listed under: [Other Projects]

757.

[Build your Internet Controlled Video-Streaming Robot with Arduino and Raspberry Pi] <The Instructable and the code are ready. Enjoy! Leave a comment with you feedback!> I'm @RedPhantom (aka LiquidCrystalDisplay / Itay), a 14 years old student from Israel learning in the Max Shein Junior High School for Advanced Science and Mathematics. I'm making this project for..... Listed under: [Robotics - Automation Projects]

758.

[Neon A Shop Open/Closed Makerspace Sign on Raspberry Pi 2 (El Paso, TX)] Neon is the name we gave to the open/closed sign we have at the entrance of our makerspace. This sign is not only an open/closed sign but it does a whole lot of things. At the makerspace we currently have access keys so this lets..... Listed under: [Temperature Measurement Projects]

759.

[Netbook Laptop Build for $ 160 – Raspberry Pi Powered.] Hey Everyone! I'm 13, and I was inspired by online projects and cool computer builds to see if I could build a laptop. This may not be the greatest tutorial ever, but this laptop has 512 mb of ram, a 1ghz processor, with wifi, around..... Listed under: [LCD Projects]

760.

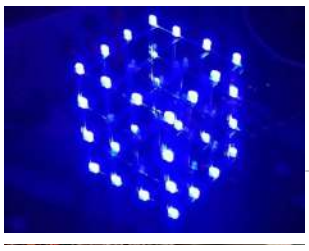
[Raspberry Pi based answering Ganesha] This project is about using Raspberry pi with USB microphone and Speaker for interactive answering machine. We are calling it Talking Ganesha. In Hindu Culture , God Ganesha is called as God of Knowledge. We have created this project just to create Talking Ganesha in..... Listed under: [Sound - Audio Projects]

761.

[Raspberry Pi. Create your first Connected Light] Create your first connected light using Raspberry Pi. Control and monitor a connected light from mobile, tablet and desktop using Lelylan & MQTT. It takes 15 minutes | $36 (eth) or $44 (WiFi) in hardware | basic level. Step 1: Hardware For this tutorial you..... Listed under: [LED Projects]

762.

[HACCSY – Hackerspace Access Control and Check in System] HACCSY abreviation stands for Hackerspace Access Control and Check in System and that's pretty much what it does. HACCSY app is meant to run on a RaspberryPi that's connected to internet and the front door electric strike lock. It does the job of a simple..... Listed under: [LCD Projects]

763. 

[Raspberry Pi 4x4x4 LED Cube] I've been fascinated with LED cubes for a while now, but haven't been able to bring myself to build an Arduino-based cube. They turn on quickly and nicely, yes, but writing the code is a horrible mess of bits and bytes. The Raspberry Pi's Python-based..... Listed under: [LED Projects]

764.

RasPi Two-Player Arcade Coffee Table Here is my version of the Raspberry Pi arcade coffee table. I got the idea from other great instructables on here and wanted to share my experience with the build. The table can play games from multiple video game eras including NES, SNES, Sega, Playstation,..... Listed under: Game - Entertainment Projects

765.

Monitor an older UPS status with a Raspberry Pi Here is a small mod I made for an OPTI-UPS VS575C. The ups has a serial port and works well with Windows, along with a serial to USB adapter and the Opti-UPS 'Sentry' software, the UPS can tell Windows when it has switched to battery..... Listed under: Other Projects

766.

DIY Ambient Lighting with Hyperion. Works with HDMI/AV Sources || Raspberry Pi This is an expansion of my previous Ambient Lighting build. Take a look at it first: http://www.instructables.com/id/Build-your-own-Amb... This time I will add a new function to my DIY Ambient Lighting. Until now It only works with the Raspbmc software. That means that I can not..... Listed under: Other Projects

767.

Portable Raspberry Pi (Retropie Handheld) Build Guide Part 1 This is a guide for making a portable handheld retropie system. this is only a guide, this is not really a detailed step by step how-to, although you will see how easy(or hard) it can be. this assumes you are not a beginner and you..... Listed under: Development Board - Kits Projects

768.

Rolling Alarm Robot Ever find yourself turning off your alarm clock without realizing it only to wake up an hour later and have to race out the door? In this build we are going to build a robot alarm clock that makes you work to turn it off!..... Listed under: Robotics - Automation Projects

769.

Runnerpi: a wifi-streaming POV camera For my IRL game The Chase, I need multiple, body-mountable, wifi-connected, live-streaming cameras. Requirements: real time streaming on demand - meaning I can switch it on remotely decent picture (hd not required...yet) mount to body or objects via gopro accessories available via local wifi network..... Listed under: Video - Camera - Imaging Projects, Wifi / WLan Projects

770.

Raspberry PI night vision goggles. Very simple and cheap Infra-Red night vision googles, using a model A raspberry pi, a NOIR camera and Quanum FPV Goggles. For a while now I have been playing with Multicopters, and whilst I prefer to make the models myself and fly them properly with..... Listed under: LED Projects

771.

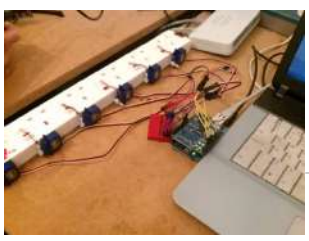
Drinking Dog – Dogs watering and spying system Drinking Dog is an easy project that can help you to take care of your pet. During the summer, when i leave at home my dog for several hours, i have the problem that water inside its bowl become warm in few time. Then i've..... Listed under: Home Automation Projects

772.

How a headless Raspberry Pi can tell you its IP address By now, most Instructables users are at least familiar with the Raspberry Pi. It's a full 32-bit computer in the dimensions of a man's wallet. You may even own one and love that it can control lots of electronic objects while still streaming media or..... Listed under: LCD Projects

773.

Join the IOT with your Weather Station – CWOP Do-Wop, Do-Wop the CWOP.... In this New Instructable by SwitchDoc Labs you will learn What is CWOP (Citizens Weather Observation Program) How to connect a Raspberry Pi based Weather Station to CWOP What Software Do You Need? How to Register at CWOP How to See..... Listed under: Temperature Measurement Projects

774. 

Internet of Things (IoT) Extension Lead Hi Makers! Intro It's about time I shared this one with you all. This project has been going so long, you would not believe. I started this before our Hack Space existed [2011 ish?], and has continued to be in a transient 'not finished, might..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

775.

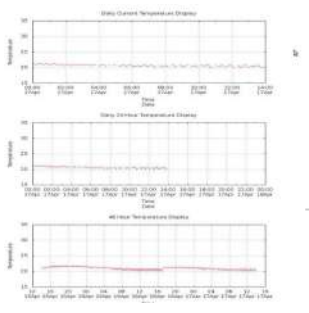
[Minimal RaspberryPI base](#) This is a plan for immobilising a Raspberry PI in a domestic environment, without children or pets, in order to run it without killing it with static. I have no idea whether this level of precaution is required, but it's been about two weeks, and..... Listed under: [Temperature Measurement Projects](#)

776.

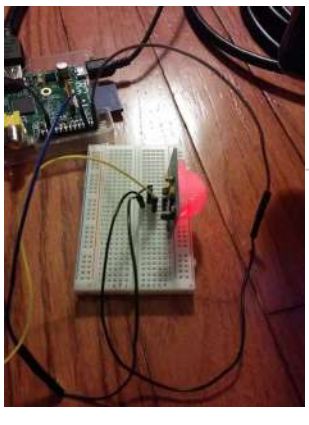
[Home automation with node js , raspberry pi and heimcontrol](#) In tutorial will make overview of using heimcontrol platform (is NodeJs application for home automation Open Source under MIT license) Some of there features: Responsive :The responsive design allows you comfortable control of your home devices using your smartphone or tablet. Everywhere : Open your..... Listed under: [Home Automation Projects](#)

777.

[Home Monitoring – Support A Loved One Remotely](#) We cannot be around the ones we love as much as we would wish. It is hard enough being there for your children but what about parents who might live hours away up the motorway or just across town. I know from my personal situation..... Listed under: [Home Automation Projects](#)

778. 

[Raspberry Pi controlled room temperature monitoring with Gnuplot image output and email alert ability](#) Where I work, there is a very important room which houses lots of computers. The ambient temperature of this room has to be very cool to optimize performance of these systems. I was asked to come up with a monitoring system which has the ability..... Listed under: [Temperature Measurement Projects](#)

779. 

[Motion Detected Music-Raspberry Pi](#) The end result of this project is for someone to walk by the Raspberry pi and have Pandora auto play automatically. Step 1: Installing Pianobar Run the following commands in the Lxterminal which can be accessed from the home screen When copying command make sure their..... Listed under: [Sound - Audio Projects](#)

780.

[Build an arcade machine powered by raspberry pi for a low budget](#) So I was inspired by the projects I saw online like the NaCade and the Porta-Pi, and wanted to build somthing similar. Problem was, as a 13 year old kid, I don't really have that much money to spend, apart from gift cards. So instead..... Listed under: [Game - Entertainment Projects](#), [Memory - Storage Projects](#)

781.

[Adding a Real Clock Calendar to your Raspberry PI](#) The Raspberry Pi doesn't have a little coin-battery-powered 'Real Time Clock' (RTC) module, which keeps time even when the power is off, or the battery removed. To keep costs low and the size small, an RTC is not included with the Raspberry Pi. If your..... Listed under: [Clock - Timer Projects](#)

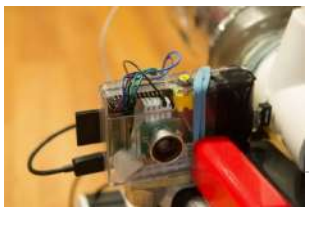
782. [Updated People Counter with Raspberry Pi](#) This is an updated version of UbiMaker's Open Source People Counter with new scripts. Where I have made mistakes, I will note them, in the hopes that you don't have to do the same! People Counters are an especially useful tool for libraries, and one..... Listed under: [Memory - Storage Projects](#)

783.

[Reuse Unwanted Infrared Remote Control to Launch Graphical Application in Raspberry Pi](#) Introduction This is an extension to my instructable "Shutting down and Restarting" Raspberry Pi using a remote control unit. This time, I want to launch graphical (GUI) applications such a a terminal emulator and a browser in addition to shutting down and restarting the RPI..... Listed under: [Raspberry Programmer Projects](#)

784.

[Host your own blog from a $25 Raspberry Pi computer](#) Now everybody knows it's way smarter to just pay someone to host your website. But what not everybody knows is that it's way more punk rock to Do it Yourself. So what follows are some tips / pointers / instructions for setting up your own..... Listed under: [Other Projects](#)

785. 

[PiTank – A web controlled tank with cannon and live video stream](#) The PiTank is a web controller tank built for a competition at my school's robotics club. The project took about two weeks to complete with all 5 team members participating in various aspects. Its main projectile are ping pong balls (up to 3).The firing mechanism..... Listed under: [Video - Camera - Imaging Projects](#)

786.

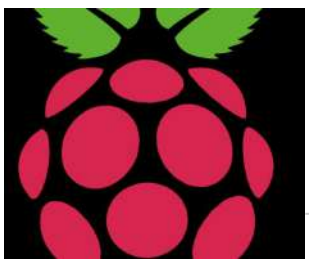
[DIY Portable Mini Monitor](#) In this project I will show you how I used a 1280x800 LCD Kit to build a battery powered portable mini monitor which is useful for your DSLR camera, your Raspberry Pi or to extend the viewing field of your computer. Let's get started! Step..... Listed under: [LCD Projects](#)

787.

[RainBerry: Compact, Weatherproof Case for Raspberry Pi A+ and Pi Camera](#) RainBerry case is a compact, aesthetically designed, weatherproof case for Raspberry Pi and Pi camera. This project was born out of a need to monitor and protect the garden using a smart Pi camera with computer vision. Step 1: Features of RainBerry Case For most..... Listed under: [Video - Camera - Imaging Projects](#)

788.

[Battery Operated Cardboard HDMI Retro TV Stand for your Raspberry Pi](#) Your Raspberry Pi deserves its own screen and stand! Why share your Raspberry Pi with the living room TV? Give your Pi its own stand and battery so you can operate it anywhere in the house or in your office. Imagine having your own retro..... Listed under: [Battery Projects](#)

789. 

[Make Raspberry Pi into a LDAP Server to Store User Account Data and Password](#) Introduction An LDAP server provide the following benefits: Authenticate for all the users of Raspberry Pis and computers in your network Store files stored /etc directory Store contact details that can be useful for email clients My personal reason of running an LDAP server is..... Listed under: [Memory - Storage Projects](#)

790.

[How to create a Scratch game with Makey Makey controller on a Raspberry Pi](#) In this instructable you'll learn how to make a simple game in Scratch on a Raspberry Pi; to make the game more fun you will be controlling it using real world objects (fruit and vegetables) via a Makey Makey. You will need: A Raspberry Pi..... Listed under: [Game - Entertainment Projects](#)

791.

[Raspberry pi NAS/UPNP MP3 Streaming Torrent Box headless](#) Raspberry pi NAS/UPNP MP3 Streaming Torrent Box headless I have a Raspberry Pi model B and a desktop HDD and wanted to host all my music and videos, Todo this I will be using raspbian wheezy for the Pi, mediatomb for the upnp streaming for..... Listed under: [Sound - Audio Projects](#)

792.

[Using IR Remote with Raspberry Pi without LIRC](#) I wanted get an IR remote input to Raspberry Pi. I manged to get LIRC installed and tested. Everything was ok, except the very last step. When I wanted pass the IR remote Key value to Python program it doesn't pass it correctly. It passes..... Listed under: [Sensor - Transducer - Detector Projects](#)

793. [Reuse Unwanted Infrared Remote Control to Shutdown and Reboot Raspberry Pi](#) Introduction This remote control in the picture used to control a fan unti fan stopped working. I threw away the fan and saved the remote control unit. This is definitely my personal favourite instructable because it is is useful for lazy

people like me..... Listed under: Robotics - Automation Projects

794.

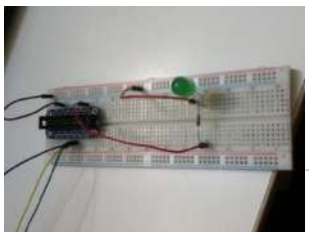
How to Install and configure Raspbian on Raspberry Pi 2 (Linux/windows/mac) Watch the YouTube Video Here The raspberry pi 2 was announced in February 2015 with a awesome tag of it being "6 times faster". With a 900 MHz quad core broadcom processor and a GB of ram, the performance is evident. With faster boot times,..... Listed under: Raspberry Programmer Projects

795.

Wall Mounted SqueezePlayer with Raspberry Pi Build a wall-mounted "SqueezePlayer"-based network music player using Squeezelite, Jivelite and a Raspberry Pi. I built this project because Logitech has stopped making its "Squeeze" line of networked music players. Since the server software is open source, and because I continue to have several network..... Listed under: Sound - Audio Projects

796.

How to Make a Raspberry Pi Case From an Altoids Tin If you have a Raspberry Pi computer board, you can make a great case for it out of an Altoids mint tin. You'll need: 1 Raspberry Pi computer board 1 Altoids mint tin 1 Plastic gift card 1 Dremel or Small drill 1 Tin snips..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

797. 

A Raspberry Pi-based Truly Random Number Generator Random numbers are essential for all kinds of things, especially cryptography. Computers, however, can only produce pseudorandom numbers, which can be "guessed" by using sophisticated software. Truly random numbers are hard to come by. Luckily, with a few wires and a Ras Pi, one can..... Listed under: LED Projects

798.

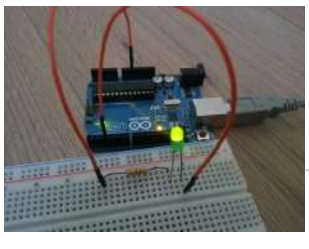
USB Powered Hub Hack For Raspberry Pi External Harddrive Step 1: Intro Hi I recently got a Raspberry Pi to use as a HTPC running Raspmc. But came into problems where the Rpi does not provide enough bus power on its USB ports to power a 2.5" external harddrive. So I decided to add..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

799.

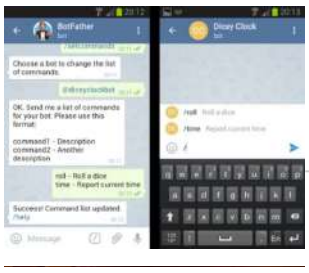
Low power usage USB speakers – ideal for raspberry pi I am in the middle of building a raspberry pi bartop gaming cabinet that runs off battery. One of the issues I ran into was that the 7" monitor I was using had no speakers, and other speakers took up too much power from the..... Listed under: Sound - Audio Projects

800.

Instamorph Raspberry Pi Case Bloominglabs has had two Build Nights recently, Instamorph and Raspberry Pi 2 / Adafruit. I have combined the two to make a case for the Raspberry Pi from Instamorph.Instamorph makes a nice material for making cases, as it's very sturdy, but easy to modify as..... Listed under: Other Projects

801. 

Easy Node.JS + WebSockets LED Controller for Raspberry Pi Hi, in this instructable, I'll show you how to create a lightweight and incredibly responsive web server with WebSockets. I'll use it to control a LED using an Arduino but the concept can be applied to many other projects. Since this project does not use..... Listed under: LED Projects

802. 

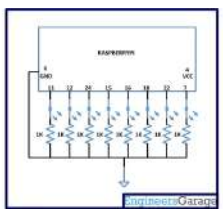
Set up Telegram Bot on Raspberry Pi On 24 June, 2015, Telegram published the Bot API, enabling machines to talk Telegram. From that day on, not only can human use Telegram, so can machines. For those who don't know what Telegram is, it is a messaging app, very much like WhatsApp. This..... Listed under: Phone Projects

803.

[IoT Motion Controlled Servos](#) Secure and reliable real time data streaming is essential for IoT. I've seen plenty of demonstrations involving applications or "push button here, LED on over there" type hardware, but a friend and I wanted to make something that was more interactive... a way to almost..... Listed under: [LED Projects](#)

804.

[Tabletop Arcade Mame Box for Raspberry Pi](#) Hello! Welcome to the build of a 2-player tabletop Arcade emulator! The box is constructed of laser-cut 6mm Baltic Birch, and aside from the wooden parts, you will need. A Raspberry Pi - I used a B+, but B will also fit. Looking forward to..... Listed under: [Game - Entertainment Projects](#)

805. 

[User Signalled Process System in Raspberry Pi](#) The Raspberrypi board is powerful enough to run large operating systems like Linux, Mac and Windows. The Multi-tasking Operating Systems can run several processes at a time creating and effect of parallel processing with the help of the high speed processor. The Linux Operating Systems..... Listed under: [Other Projects](#)

806.

[Testing & Setting the USB current limiter on the Raspberry Pi B+](#) One of the features of the new Raspberry Pi B+ is improved power handling – particularly round the USB interfaces. There is a device connected to the power to the USB ports that is quite clever – it controls the power and “soft starts” the..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

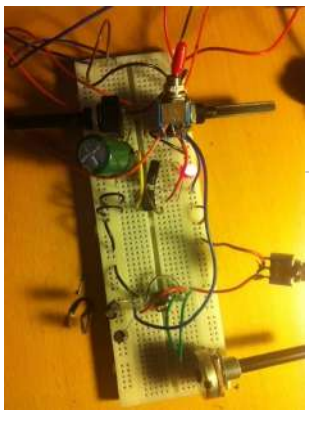
807. [Marz – Prototype I Final Report: Campus App](#) Introduction: We wanted to design a tool that helps campus-going individuals out with finding places within their university and organizing their college tasks. The Campus App is a smartphone application that uses fine GPS data to provide a map of campus for the user. It..... Listed under: [Wireless projects](#)

808. [Group 9 – Prototype I Final Report: Remote Piano Pedal Controller](#) Introduction: As a group, we feel that everyone should be able to enjoy the things they love to do despite their limitations. Our project is designed to enable people who are unable to use their legs to operate the pedals of a piano and to..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

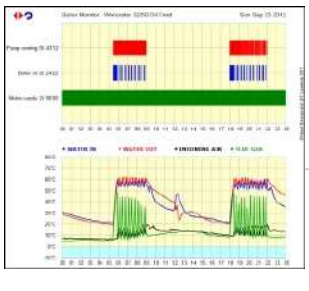
809. [Boards – Breakout the Pi – I2C, UART, GPIO and More](#) This post will be one in a series for all the components available to literally break out the expansion ports from the Pi. This series will cover Breadboarding components to connecting the various Shields and plates that are designed specifically for the Pi. 1. Breakout..... Listed under: [Development Board - Kits Projects](#)

810.

[CCTV surveillance using Raspberry Pi](#) Overview For Security purposes, we usually need to capture every motion in specified areas. To fulfill this requirement, CCTV cameras were introduced a few years ago. However, this brought along some challenges such as the following: The ordinary security cameras run continuously, in turn recording..... Listed under: [Security - Safety Projects](#)

811. 

[Hermanizer Power Pedal – A DIY Fuzz Box](#) For christmas gift to my brother I thought I'd try to make a guitar effect pedal. The main feature would be to have a nice sounding distortion effect, classic rock fuzz. I also found an article on Instructables by Harrymatic discussing adding a timer IC..... Listed under: [How To - DIY - Projects](#)

812. 

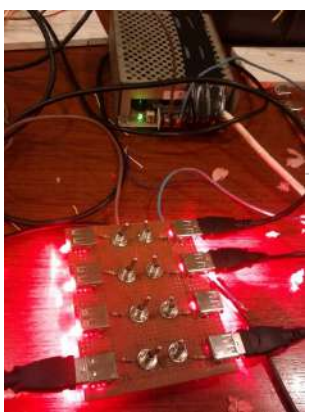
[Monitoring My Central Heating Boiler](#) Hardware Since I was replacing the PC with a Pi, I have only listed the Pi-specific hardware here because the relay unit remains the same: Model B Pi Piface Digital interface card Dallas Semiconductor (Maxim) DS9490R 1-Wire USB adapter Dallas Semiconductor (Maxim) DS18S20 1-Wire thermometers..... Listed under: [Temperature Measurement Projects](#)

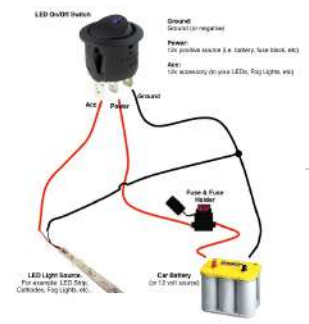
813.

PROJECT 2 – Driving a Liquid Crystal Display Introduction You can use the Pi to drive a Liquid Crystal Display (LCD) to display all sorts of information: it could be date, time, system status, disk utilisation, MAC and IP address, etc. The most common LCD is one based on the Hitachi HD44780 chip..... Listed under: LCD Projects

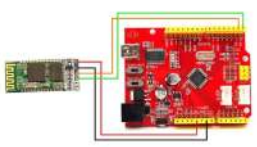
814.
Raspberry Pi on a Portable B&W CRT Last week at hacklab.to, my friend Igor brought in a Panasonic TR-1030P. This is a black and white CRT, with an astonishingly small 35mm (1.37") screen diagonal, circa 1984. A great find for $5 at Value Village. A good set of teardown pictures can be..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

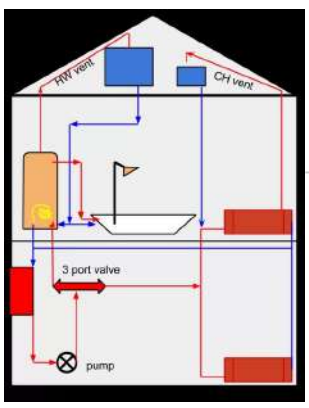
815.
Raspberry Pi Temperature Sensor A few weeks ago, I purchased a Raspberry Pi. After reading Eben Upton's Raspberry Pi User Guide, particularly the two chapters on which he focuses attention on the GPIO, I had an idea for my first project. The post covers the first iteration of a..... Listed under: Sensor - Transducer - Detector Projects

816. 
Building a Raspberry Pi Cluster Once upon a time... So this is how this story began... The Raspberry Pi has fascinated us geeks from the time it was first announced. We were thrilled to hear that Eben will be presenting at WSO2Con, and even more thrilled when Sanjiva suggested that..... Listed under: Ideas

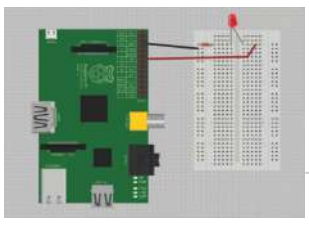
817. 

Raspberry Pi Flashing Led Simple Circuit Diagram Raspberry pi blog - news, announcements, ideas, Looking for raspberry pi news, product announcements, fun project ideas, and stories from the global pi community? read the official raspberry pi blog.. Raspberry pi : adafruit industries, unique & fun diy, Adafruit's goal to help the world..... Listed under: LED Projects

818. 
Talking to a Bluetooth Serial Module with a Raspberry Pi Bluetooth is a very low cost and flexible way to add wireless communication to your projects. However, it can also be a bit tricky to set up. In this post we show you how to set up a Raspberry Pi with a USB Bluetooth dongle..... Listed under: Bluetooth Projects

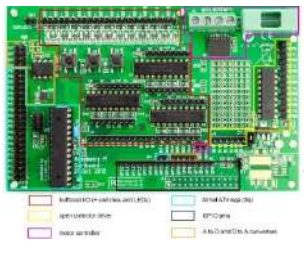
819. 

Raspberry Pi powered heating controller (Part 1) TL;DR: It should be fairly straight forward to add a Raspberry Pi controlled heating and hot water system to a standard UK domestic set up and, more importantly, remove it again without messing with the existing set up. As a minimum you'll need a Raspberry..... Listed under: Home Automation Projects

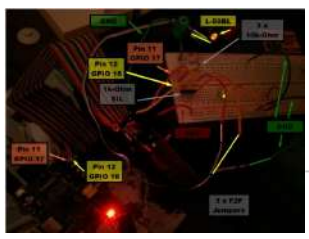
820. 
LED candle with Raspberry Pi The General Purpose Input/Output pins (GPIO) give you power to interact with the real world using your Raspberry Pi. This project will get you comfortable with using the GPIO pins, which will form the backbone of the final project. Traditionally the 'Hello World' program for..... Listed under: LED Projects

821.

Raspberry Pi Webcam Robot – Best Video Streaming Tutorial It is always cool to add a camera to your remote controlled car or robot, so that you can see where its heading exactly and probably use a wifi enabled smartphone or tablet to view the video as well.Its very simple now to do this using a..... Listed under: Robotics - Automation Projects

822. 
Control Your Pi with Webiopi Webiopi is a fantastic framework for controlling your RPi over the web. I found it a steep learning curve, but once you've got head around a few ideas it provides a very powerful way of bringing your RPi to life. I am primarily using it..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

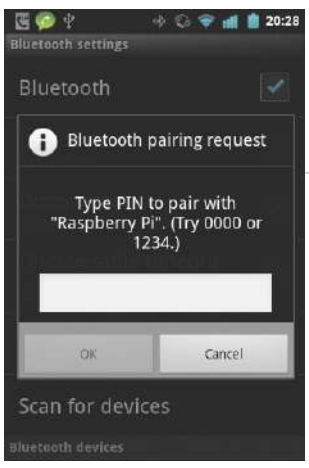
823. RaspiRobot Board V2 ** Works with the Raspberry Pi2 ** The RasPiRobot Board V2 is an expansion board designed to turn your Raspberry Pi into a robot controller! This board comes fully assembled and includes a switched-mode power supply so you can supply your Raspberry Pi from a..... Listed under: Ro s - Automation Projects

824. 

[Raspberry Pi – BI-COLOR RIGHT ANGLE LED – 2xGPIO](#) Moving on from "My first GPIO LED", I decided to take a look at a different LED I had in my possession, an L-59BL/1. This LED has 3 pins and I had no idea what they were for, so I Googled it and found this..... Listed under: LED Projects

825.

[Autoadvent: Raspberry Pi controlled LED Advent candles](#) A couple weeks ago my Dad mentioned to me it would be cool if advent candles automatically lit themselves according to the date. (One candle is lit starting the 4th Sunday before Christmas with an additional candle being lit for each of following Sundays). I..... Listed under: LED Projects

826. 

[Emulate a Bluetooth keyboard with the Raspberry Pi](#) Today, we'll be learning how to use a Raspberry Pi to act as a Bluetooth keyboard, and writing our own program to relay input to the client device. This will provide a useful insight into how a protocol like Bluetooth works, how sockets work, and..... Listed under: Bluetooth Projects

827.

[The best Raspberry Pi power supply](#) Ok, since we already documented a little about the importance of a good PSU (Power Supply Unit) when audio quality is your main concern. As stated earlier, the raspberry pi power supply is also responsible for proper functioning of our tiny device, as a poor..... Listed under: Other Projects

828.

[How to Build a Handheld, Raspberry Pi-Powered Game Console](#) The Raspberry Pi is a great little mini-computer for playing classic video games from your childhood. But, thanks to its small size, it's also possible to turn it into a portable handheld game console that plays your favorite titles, from NES to N64. I call..... Listed under: Game - Entertainment Projects

829.

[Raspberry Pi chats to Arduino](#) Well I got the Pi working, so what next? After a tiny amount of pondering I decided to get it chatting to an Arduino using the serial interface. I'll try and note down everything relevant so this'll be as much a guide to doing it as..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

830.

[Raspberry Pi Web-Enabled Irrigation Bypass Project](#) A Better Solution The problem with rain sensors lies within how they are engineered. My particular rain sensor works by using absorbent cork discs to detect moisture. When it rains, the discs swell-up with water, depressing a switch which disables the watering. The watering is..... Listed under: Internet - Ethernet - LAN Projects

831.

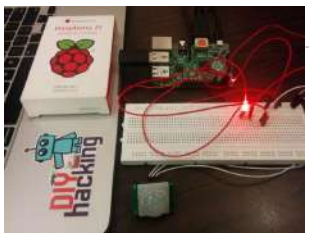
[Best Voice Recognition Software for Raspberry Pi](#) The best voice recognition software out of three we tested, and how to set it up on Raspberry Pi. On a mission to find the best voice-recognition software for Raspberry Pi, I installed and tested three different systems. Two were internet-dependent and one was offline..... Listed under: Video - Camera - Imaging Projects

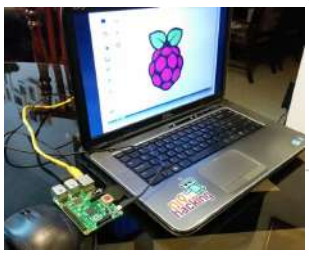
832.

[Raspberry pi touchscreen LCD: The Best LCD Tutorial](#) Touchscreen displays are always one of the coolest things that you can add to a raspberry pi. Having a neat display always boosts the overall funk of your project. You can build upon a prolific number of applications using portable TFT LCD displays. Maybe create..... Listed under: LCD Projects

833. [Raspberry Pi – Head Mounted Display Tutorial](#) Head mounted displays are definitely the latest fad that's going around town now. You might have seen several wearable displays such as the google glass, and many others including virtual reality systems like the oculus rift. Head mounted displays are primarily used for video sharing,..... Listed under: How To - DIY - Projects

834. [Raspberry Pi GPIO with PIR motion sensor: Best tutorial](#) This tutorial, based on the latest Raspberry Pi B+/model 2, will show you to interface a PIR motion sensor with the Raspberry Pi. And also guides you to use the GPIO pins on it. The GPIO pins on the raspberry pi are critical when it..... Listed under: Sensor Transducer - Detector Projects



835. 

[The Best way to Connect Raspberry Pi to Laptop display] What are the stuff required to do this? Raspberry Pi. Ethernet Cable. Laptop. SD Card with Raspbian. Micro USB Cable. (Optional) Components required for setting it up the first time: HDMI/ AV Display. Keyboard and Mouse. How does it work? To connect raspberry pi to..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

836.

[Solar Power, Weather and the Raspberry Pi] Solar Power, Weather and the Raspberry Pi SwitchDoc Labs is in the process of building a Solar Powered Raspberry Pi Weather Station. The design will be released as a SwitchDoc Appnote, an Instructable and a series of posts on SwitchDoc.com. We are right in..... Listed under: [Solar energy projects]

837.

[USB MIDI interface] The RPC is a MIDI controller and implements the age-old 1980s serial MIDI bus, and the Protosynth must be capable of interfacing with it. But in general use a USB device port is much more practical than the three ubiquitous MIDI ports; it allows connecting..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

838.

[Raspberry PI – MSP 430 – LCD] DEM16101 LCD unusable No matter how hard I tried, I couldn't figure out how to use it. I think I managed to talk to the KS066 controller correctly (I reliably reset the controller using the initialization sequence) but I could not figure out the voltage..... Listed under: [LCD Projects]

839.

[Nokia 5110 graphics tutorial] Okay, here's the deal. There are some tutorials on youtube showing how to get graphics to show on the nokia 5110 and that's great. If you just want a simple way to do that, go and watch them instead but there are a few problems..... Listed under: [Phone Projects]

840.

[Use RPi, Azure, and Cortana to Automate your Home!] Introduction There is new technology all around us and only more coming every day. Our micro controllers are getting faster, are phones getting smarter, and the cloud is becoming stronger. With all this new technology everyone is asking themselves: How can I utilize it all?..... Listed under: [Home Automation Projects]

841.

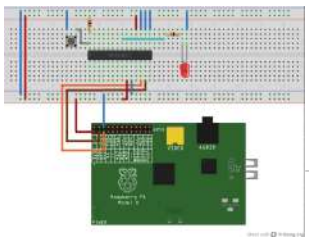
[IOT: iPhone Controlled Mini Fan] Step 1: Materials iPhone Mac with xcode RFduino RFduino Battery Shield RFduino USB Shield Batteries Wires TIP120 2.2kOhm resistor Diode DC Motor Fan blade for DC Motor Step 2: Circuitry Setup the circuitry as shown in the diagram. (If the servo is small enough, we..... Listed under: [Phone Projects]

842.

[WS4E – Ham Radio And Other Stuff] The Arduino Fox Hunt Transmitter will be documented in another post, in this post I want to document the Raspberry Pi SSTV Field Day Beacon. The one thing that I don't like about the Raspberry Pi is that it only has digital input/output logic lines..... Listed under: [Radio Projects]

843.

[Reading analogue data on a Raspberry Pi using MCP3002] I got a bit disappointed with my little bus pirate yesterday. I'll investigate how to update it to fix the odd SPI behaviour another time, but for now, its on to trying to read the MCP3002 SPI ADC chip directly using the Raspberry Pi. However,..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

844. 

[Interfacing an I2C GPIO expander (MCP23017) to the Raspberry Pi using C++ (i2cdev)] The I2C Bus The I2C bus is a two wire bus developed by Phillips/NXP (4-wire if you want to include power and ground), that is used to connect a single master device to up to 120+ slave peripheral devices. The master device is typically a..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

845.

[Raspberry pi as an nrf24l01 base station with python for smart home or internet of anything projects] Internet connectivity in an integral part of various micro-controller projects, specifically those using the atmega328p with arduino ide/avr-gcc. NRF24l01 modules provide an inexpensive and reliable wireless link. In many projects, an additional avr/arduino is hooked up to a computer with internet connection for linking the..... Listed under: [Internet - Ethernet - LAN Projects]

846.

[Configuration Utilities for XBee Radios] Xbee Radios I purchased two XBee Series 1 Module (Freescale 802.15.4 firmware) from Adafruit. These are manufactured by Digi and are low-power module with wire antenna (XB24-AWI-001). They have a 250 kbps RF data rates and operate at 2.4 GHz. These radios use the IEEE 802.15.4 networking protocol and can perform point-to-multi-point or peer-to-peer networking ,..... Listed under: Radio Projects

847.

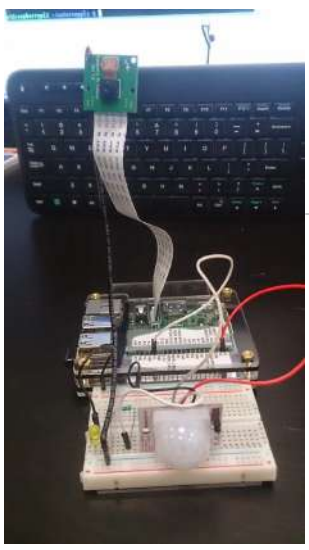
[NetWorker – an advanced web server with a microcrontroller] An Internet connection would be a valuable addition to many projects, but often designers are put off by the complexities involved. The 'NetWorker', which consists of a small printed circuit board, a free software library and a ready-to-use microcontroller-based web server, solves these problems and..... Listed under: Internet - Ethernet - LAN Projects

848.

[PCB designing and isolation milling using only free Software] In this Instructable I will show you how to design and fabricate your own PCBs, exclusively using free software that runs on Windows as well as on a Mac. Things you need: computer with internet connection cnc mill/router, the more accurate the better 45°/20° V-Bit..... Listed under: Development Board - Kits Projects

849.

[Solar Phone Charging Back Pack] Step 1: Materials and Tools Materials (1) backpack. There are 2 requirements when choosing a good backpack for this project: room to install your solar panels and a pocket to store your cell phone. The Drifter square backpack is perfect for this project. (1) portable..... Listed under: Phone Projects, Solar energy projects

850. 

[Build an Intruder detector with Raspberry Pi and robomq.io] Device, sensors and systems connecting together are driving the next generation of applications creating the Internet of Things (IoT). robomq.io provides an open standard based platform to connect your devices and sensors to the back end applications, systems, processes and people, enabling you to build..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

851.

[Analogue Sensors On The Raspberry Pi Using An MCP3008] inputs which means it is a bit of a pain to use many of the available sensors. I wanted to update my garage security system with the ability to use more sensors so I decided to investigate an easy and cheap way to do it..... Listed under: Sensor - Transducer - Detector Projects

852.

[LED Rubik's Cube With Arduino] In this instructable I'll show you how you can build your own LED Rubik's cube. This project was done for an introductory electronics course at Pomona College. Groups were given approximately two months to complete a project of their choosing, the only requirement being that..... Listed under: LED Projects

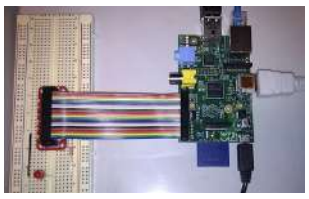
853.

[Access Control of Door and Home Security by Raspberry Pi Through Internet] 1 INTRODUCTION In this modern world crime has become ultra modern too! In this current time a lot of incident occurs like robbery, stealing unwanted entrance happens abruptly. So the security does matters in this daily life. People always remain busy in their day to..... Listed under: Home Automation Projects, Security - Safety Projects

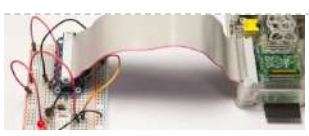
854.

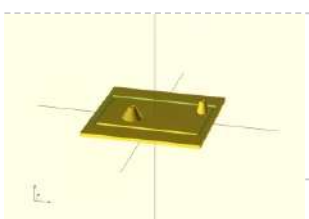
[Model Railway Automation] This note introduces my experiences of using the Raspberry Pi to automate a model railway. Two aspects are covered: •Sending commands to a DCC controller •Detecting a train's position. Sending commands to a DCC controller The RPi is connected to a Hornby Elite DCC controller..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

855. [Raspberry Pi GPIO and LED] Flash an LED - Works Remotely In this exercise you update your Pi, install the GPIO tools, and write a program to flash an LED ten times. If you use PuTTY to log in remotely, you could flash LEDs on another continent. I have tried..... Listed under: LED Projects

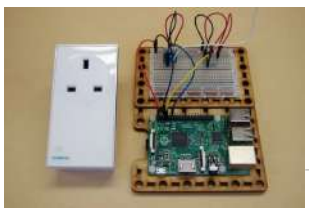


856. Solar Powering My Home! My home has been solar powered since June 2013 and the power system has proven its reliability. I'm a proud owner of an OFF GRID solar power system. I decided to publish this instructable to let fellow DIYers know the basics to design and install..... Listed under: Home Automation Projects, Solar energy projects

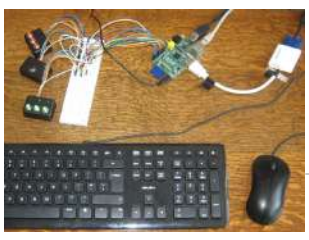
857.  On/Off Project – Switch a light on/off using your smart phone f you found this article after doing a search on Google, welcome! On this website you will find plenty of content around DIY home automation using open-source hardware. Enjoy the article! I have been asked a lot about writing tutorials using the Raspberry Pi for home automation, as well..... Listed under: Phone Projects

858.  Solar powering a Raspberry Pi for Bitcoin mining Introduction: As a simple one-GPU bitcoin miner, the recent growth in ASIC (Application specific integrated circuit) bitcoin mining hardware has been a real gamechanger. In my case, there are some disadvantages to the change, namely having to spend the few bitcoins I have mined on..... Listed under: Solar energy projects

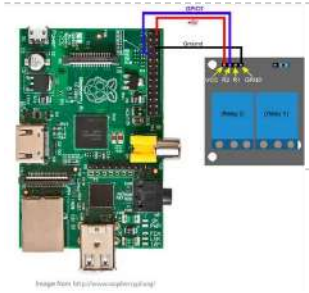
859. Air Pollution Detector This device is intended to provide the user with a cost-efficient means of determining air quality. Our sensor focuses on the five components of the Environmental Protection Agency's Air Quality Index: ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrous oxide. This device detects all..... Listed under: Sensor - Transducer - Detector Projects

860.  Home automation with Raspberry Pi 2 and Node-RED Node-RED is a visual tool for wiring the Internet of Things that can be run on a Raspberry Pi and allows for rapid prototyping of projects. In this tutorial we will first set up Node-RED on a Raspberry Pi 2, before creating a flow that..... Listed under: Home Automation Projects

861. Raspberry Pi in a NES Case – Part 1 – Wiring up the front panel and external connectors Raspberry Pi is a great project computer, it's cheap ($35), runs Linux (or Risc OS) and has lots of resources available aroudn it. When mine arrived, I didn't really know what to use it for, but then it hit me: I can build an emulator..... Listed under: Game - Entertainment Projects

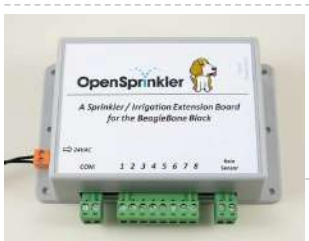
862.  Resources – Computing Club Sessions – Raspberry Pi 2 – Python Overview This is an opportunity to look at another language (Python), another IDE (IDLE) and have another go at Scissors, Paper, Stone. Hardware This is going to use the GPIO pins (the two rows of 13 pins - 26 in total) on the Pi. We'll..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

863. Talking to a ZWave Switch using open-zwave Z-Wave is a wireless communications protocol designed for home automation, specifically to remotely control applications in residential and light commercial environments. The technology uses a low-power RF radio embedded or retrofitted into electronics devices and systems, such as lighting, home access control, entertainment systems and..... Listed under: Home Automation Projects

864.  Raspberry Pi Garage Door Opener with GaragePi Introduction When I was little, I used to push the garage door button from inside the garage and then run out the garage while it's closing... carefully jumping over the sensor so I don't trip the safety mechanism. It was easy back then and a..... Listed under: Home Automation Projects

865. How To Use GPIO Pins On Raspberry Pi – Buttons And LED Tutorial What Are The GPIO Pins on Raspberry Pi? A great feature on the Raspberry Pi is the GPIO pins (stands for General Purpose Input Output). These GPIO pins on Raspberry Pi can be found in 2×13 header pins which can perform tasks include SPI, I2C, serial UART, 3V3..... Listed under: LED Projects

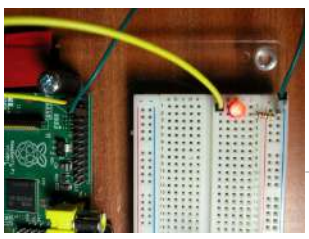
866. Design Your Home with Autodesk Homestyler Autodesk Homestyler is a free online home design software, where you can create and share your dream home designs in 2D and 3D. The online tool allows you to either upload your existing floor plan or create a new one with simple drag and drop..... Listed under: Home Automation Projects

867. 

Announcing OpenSprinkler Beagle (OSBo) v1.0 Following the sneak-peak preview, I am excited to announce that OpenSprinkler Beagle (OSBo) v1.0 is now officially released! OpenSprinkler Beagle is an open-source sprinkler / irrigation extension board for the BeagleBone Black. It uses four GPIO pins to control an unlimited number of sprinkler valves..... Listed under: Wireless projects

868.
beakn v0.3 : DIY Lync Status Light with a RaspberryPi, .NET, Mono and MQTT I'm continuing to build out "beakn" my DIY Lync Status light. This is what I'm calling a "maker experience" project. I want to know what a maker goes through to build things so I'm building it with as many different platforms as possible. I've built…... Listed under: How To - DIY - Projects

869.
Raspberry Pi OpenCV Pan & Tilt Face Tracker Create your own face tracking, pan and tilt camera on the Raspberry Pi! This tutorial will demonstrate use of the OpenCV (computer vision) library to identify and track faces on the raspberry pi using two servos and a USB webcam. For the interested, I previously…... Listed under: Video - Camera - Imaging Projects

870. 
1: A single LED Before we even get started with the GPIO, lets make an LED light up by simply wiring it to the +3.3v supply and 0v. So… We have a yellow wire from the Pi's +3.3v supply to the breadboard and this connects to an LED then…... Listed under: LED Projects

871.
Morse Code on an LED Difficulty: beginner This tutorial will guide you through safely connecting up an LED to your Raspberry Pi and being able to turn it on and off from Python. Then you will write a program to take input from the keyboard and send it out in…... Listed under: LED Projects

872.
Connecting a 16×32 RGB LED Matrix Panel to a Raspberry Pi Overview Everyone loves a colorful LED screen! Our 16x32 RGB LED display is a low cost, and easy-to-use arrangement of bright LEDs - just like the ones used in Times Square! This display makes a fantastic addition to your Raspberry Pi. It is pretty easy…... Listed under: LED Projects

873.
How to make a Raspberry Pi surveillance and alarm It's the 1st of July, and hopefully you are lucky enough to go on holiday soon, this is a great way to make a useful project right before leaving home alone! This is a cheap but powerful system of surveillance and alarm, we know it's…... Listed under: How To - DIY - Projects

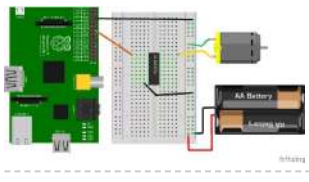
874.
Using A Joystick On The Raspberry Pi Using An MCP3008 While browsing eBay looking at electronics stuff I found a few interesting items to connect to the Pi. The first item was a small 2-axis analogue joystick. They are similar to the thumb-sticks you would find on a modern games console controller. These modules are cheap and…... Listed under: Game - Entertainment Projects

875.
A cheap Bluetooth serial port for your Raspberry Pi While working on my Arduino based robot vehicle project the idea came to me that the Bluetooth module that I'm using as a remote control receiver for my robot would make a great addition to my Raspberry Pi. In this article I describe how to…... Listed under: Bluetooth Projects

876.
Gertboard-Pi Potentiometer Controlled Motor In the potmot (for potentiometer-motor) test we use a potentiometer ("pot") connected to the analogue to digital converter (A/D) to get an input value, and this value is used to control the speed and direction of the motor. It is set up so that at one extreme, the…... Listed under: Motor Projects

877.
Expanding the Raspberry Pi with PiFace and Pi Rack The marvellous Raspberry Pi, essentially a cheap, small PC, is a great device for education or home projects like media streaming. Out of the box though, it is not ideal for controlling other devices other than by USB or ethernet. What if you wanted to…... Listed under: Home Automation Projects

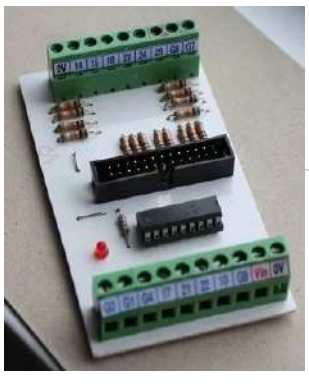
878.
Build Raspberry Pi robots: Best Tutorial for beginners If you are a beginner to Raspberry Pi and were looking for a simple hardware project, then look no further. This tutorial will show you to develop a python based robot which avoids obstacles and navigates freely. Obstacle avoiding robots are fairly common and easy…... Listed under: Robotics - Automation Projects

879. 
Raspberry Pi Control Motor Speed Controlling a motor is one of the most exciting things you can do with your Raspberry Pi. Motors are power-hungry components. They often require more power than the 3V3 your Raspberry can provide. That's the reason we will connect the motor to a external power…... Listed under: Motor Projects

880. Research: Raspberry Pi – Pins, Buttons and Circuits In a previous post I wrote about how you can control the function of the Raspberry Pi's software through writing scripts, but one of the remarkable things about the Pi is that it is also capable of interacting with the physical world through its GPIO pins. GPIO stands…... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

881.

[Raspberry Pi STL in a Box](#) I promised more details in the future about the Raspberry Pi STL build. Well, against all odds, I'm going to deliver! The project exists purely to solve a problem with getting audio between two sites for a hospital radio station. They currently use a costly..... Listed under: [Radio Projects](#)

882. 

[A Raspberry Pi Interface Board](#) The Raspberry Pi computer is eminently suitable for interfacing. It has 17 GPIO lines which can be programmed to be either inputs or outputs as well as various other functions. They are very low power lines however, and on their own can only drive tiny LEDs..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

883.

[Building a segway with Raspberry Pi](#) Step 1: Materials Raspberry Pi, AC-to-DC 5V power adapter, plastic enclosure I am using Raspberry Pi 2, with Raspbian installed. Cost $45.0 USB WiFi adaptor, I'm using Edimax Wifi adaptor. Cost $10.0 DC motors x2, wheels x2, car frame, acrylic sheet x2, motor bracket x2,..... Listed under: [Robotics - Automation Projects](#)

884.

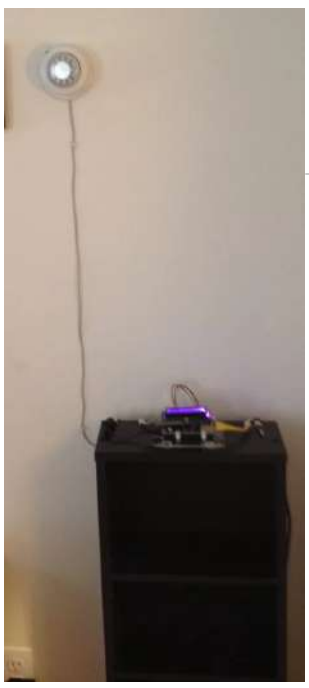
[Raspberry PI:- USB, Ethernet, crashing and other problems](#) Do you have frustrating issues with your Raspberry PI Are you experiencing problems with your PI, you can't explain or figure out why? You bought what you thought where good accessories (Keyboard, Mouse, WIFI adapter and cables), well read on, you may discover your problem..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#), [Internet - Ethernet - LAN Projects](#)

885. [Cedarville University builds RoboBoat vehicle with 4 Raspberry Pi's, MATLAB and Simulink](#) In Part 1, Sergio described the RoboBoat Competition and introduced our entry, the Cedarville University RoboBoat team. In this article, we will go into depth with regards to how we programmed our autonomous aquatic vehicle's PC and five Raspberry Pi's using MATLAB and Simulink. Last..... Listed under: [How To - DIY - Projects](#)

886. [Tutorial – sPiRobot : Control & See what your Robot is seeing from Anywhere](#) Why sPiRobot ? If you are following my blog I always use Arduino Board to make my projects, but for this I use Raspberry Pi as a brain of my Robot. That's the reason I called this "PiRobot". aterials ? 1x Raspberry Pi 1x Webcam..... Listed under: [Robotics - Automation Projects](#)

887.

[Remote Logic](#) The Raspberry Pi is often hailed for its incredibly cheap price. Other low-cost development and educational boards are available (e.g., the Beaglebone), but for some of these systems, the additional peripherals that are required can quickly amplify the cost. The Raspberry Pi, however, is designed..... Listed under: [Wireless projects](#)

888. 

[Aaron's piHouse Monitor](#) ntroduction I have been using microcontrollers for a long time now. I started in college as part of the program and have never stopped. Professionally, educationally, hobby, I've done projects of all types. Recently I decided to try something with a Raspberry Pi. It is..... Listed under: [Home Automation Projects](#)

889. [Home Automation with Raspberry Pi](#) The Surveillance System this year I planned to travel with my family to China for a few weeks, so we had to leave alon r house. While being on vacation, I wanted to check sometimes if everything was alright at home. So I decided to..... Listed under: [Home Automation Projects](#)

890.

[Part 2: How to build a High-Definition FPV UAV using a Rasperry PI with HD camera, using a high speed WiFi link](#) This is the second part of a 2-part series on 'How to build a High-Definition FPV UAV using a Raspberry PI with HD camera, using a high speed WiFi link. In my first post on the subject (located here), I discussed the parts I used, and..... Listed under: [Video - Camera - Imaging Projects](#), [Wireless projects](#)

891. [3D Printing MouseAir V2 – Part 1 / Raspberry Pi Project](#) The Mouse Air project has been around in various stages since April of 2014. The goal of the project (conceived in a bar, the Fedora in Coeur d'Alene Idaho and named by Sarah, the most excellent bartender there. And some BlueMoon Beer.) was to be able..... Listed under: [How To - DIY - Projects](#)

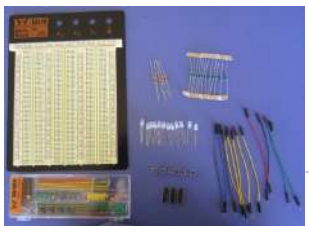
892.

[Gertboard Open Collector Drivers: ULN2803APG](#) If you were wondering how to use the open collector drivers on the Gertboard version 1, then you have come to the right place. As shown in the diagram, the red area marked out is the open collector driver section. The ULN2803APG is a Darlington..... Listed under: [Development Board - Kits Projects](#)

893. [Raspberry Pi – homemade level converter for serial communication rs232 3.3 volts to 5 volts TTL for AVR microcontroller](#) I found that the Raspberry Pi serial interface rs232, described in a older post by myself, was too bulky. Pi and AVR should be connected through a less amount of wires. So I've searched the best hints to solder a cheap and uncomplicated level converter,..... Listed under: [Home Automation Projects](#)

894. [PIE1 – Raspberry Pi Sends Live Images from Near Space](#) HAB (High Altitude Ballooning) is a growing hobby where enthusiasts use standard weather balloons to put small payloads typically 100g-1kg into "near space" at altitudes of around 30km or so, carrying a tracking device (so the balloon position is known throughout the flight) and usually..... Listed under: [Video - Camera - Imaging Projects](#)

895. [Raspberry Pi – RGB LED conversion](#) I was looking at the cost of an Arduino and Ethernet shield and thinking that they are quite expensive compared with a Raspberry Pi. So time to update my Arduino RGB LEDs project to run on a RPi. As noted all over the web the..... Listed under: [LED Projects](#)

896. 

[Section 3: Building the Turing Machine](#) Introduction In this project, we shall build a 3-symbol Turing machine using 11 bicoloured LEDs to represent the cells on the tape. Green represents a 1, red represents a 0 and a blank is represented when the LED is off. We shall call these the..... Listed under: [LED Projects](#)

897. [Pi Ball – A Spherical and Interactive Raspberry Pi 2 Case](#) Here were my requirements - Use a Pi (Raspberry Pi 2 in the case) - Spherical case, that can be bounced, kicked, thrown - Accelerometer onboard to monitor the motion of the ball - Wireless everything! Wireless keyboard/mouse, networking, sound and video (Pi Ball in..... Listed under: [Game - Entertainment Projects](#)

898.

Temperature Measurement for Lab and Science Projects Introduction Every lab (home, office, school) needs temperature measurement capabilities. Measuring temperature for science experiments is hard – all sorts of materials, liquids, and chemicals may be involved or a large temperature range may need to be covered. The sensor used for this (a thermocouple)..... Listed under: Temperature Measurement Projects

899.

A GSM/GPRS & GPS Expansion Shield for Raspberry Pi Today we present an expansion shield for Raspberry Pi to control the very effective GSM/GPRS SIM900 and SIM908 (with GPS) modules: in this way it is possible to extend the functionality of Raspberry Pi for mobile applications (eg: remote control) and, by employing the SIM908..... Listed under: Wireless projects

900.

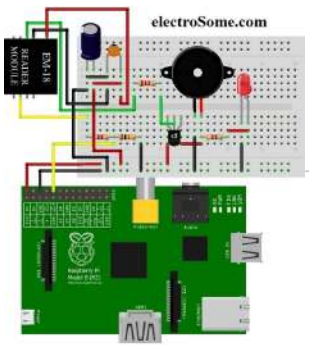
Solar Power on the Raspberry Pi – SunAir designed to charge LiPo batteries from Solar Panels and power your Pi. First SunAir Kickstarter Update (Dec 7, 2014) Published here. An earlier generation of this project was used in Project Curacao. You also can track the sun, detect low power conditions and more. Works perfectly with..... Listed under: Solar energy projects

901.

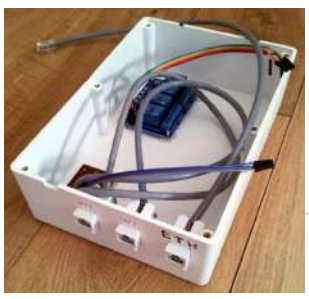
Project Coffee: Es(pi)resso Machine ome time ago, I embarked on a project to control my Gaggia Classic Espresso machine with a Raspberry Pi. Obviously, you can buy a fully automatic "bean to cup" machine... but where's the fun in that! This project started out with the simple idea of..... Listed under: Home Automation Projects

902.

G0MRF 29.45 MHz Receiver Project In 2007/8 AMSAT-UK put considerable work into a proposal to the European Space Agency (ESA) to place an Amateur Radio payload on the mass dummy on the maiden flight of the VEGA launcher. Known as iSTAR (Integrated Suite for Teaching and Amateur Radio) it was..... Listed under: Wireless projects

903. 

Interfacing EM-18 RFID reader with Raspberry Pi RFID (Radio Frequency Identification) uses electromagnetic fields to read, monitor and transfer data from tags attached to different objects. It is not necessary that the cards are to be in visibility of the reader, it can be embedded in the tracked object. The tags can..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

904. 

Controlling Domestic Hot Water Supply with Raspberry Pi Contents Background Hardware Pi Wiring Heating System Wiring Software Remote Access Gas Consumption Impact Background I want to implement a Raspberry Pi controlled heating and hot water system. On the hot water side, the objectives are Primary Always ensure there is sufficient hot water available..... Listed under: Home Automation Projects

905.

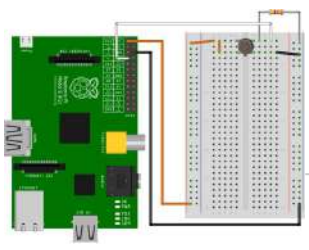
Dual DC motor control using pwm with the Raspberry Pi This project uses two IRF 630 MOS-FET transistors for pulse width modulation and two relays to change the direction of the two motors. . The circuit diagram is below. The two IRF 630 MOS-FETs are connected to the GPIO 15 and 18 pins of the..... Listed under: Motor Projects

906.

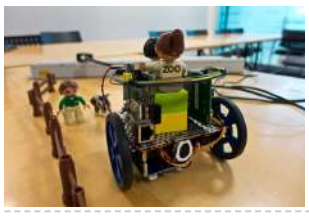
Home Weather Display In this project, we use a Grove DHT (Digital Humidity and Temperature) sensor as a Raspberry Pi temperature sensor. This project uses a Grove OLED display, connected to the Raspberry Pi, to show the temperature and humidity. You can use this project as designed: a simple weather station for..... Listed under: Home Automation Projects

907.

Home Energy Monitoring System The Purpose (Mission) Monitor, archive and analyze energy consumption in the house Visualize historical consumption data Access data remotely from Web Eventually include data from other sensors, like temperature, pressure, humidity, motion, light, security, etc. UPDATE: Temperature/Pressure sensors added: Additional Sensors for Home Energy Monitor..... Listed under: Home Automation Projects

908. 

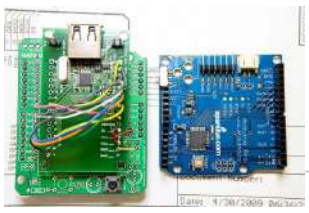
Connect a sensor to your Raspberry Pi to warn you when there are noxious gases about! o detect a fart with the Raspberry Pi, we need to use a sensor that is responsive to one or more of the volatile sulphuric compounds which make up 1% of flatulence (i.e. the compounds which make farts smell). Essentially, we need to give the..... Listed under: Sensor - Transducer - Detector Projects

909. 

[XMOS startKIT: Building an XMOS and Raspberry Pi Robot XMP-1](#) Introduction The XMOS startKIT from Farnell (or Newark) is a very low cost (£12 including VAT) processor platform that works well with the Raspberry Pi. Together is possible to construct robotics applications with almost no soldering required. The XMOS startKIT is a near-credit-card sized board..... Listed under: [Robotics - Automation Projects](#)

910.

[Control an LED from your web browser or smartphone using Raspberry Pi](#) A first project – Internet controlled LED In this simple, inexpensive project you can connect a light emitting diode to your Raspberry Pi, and turn it on and off using any web browser. There's even an app for Apple, Android and Windows smartphones. Prerequisites To run this..... Listed under: [LED Projects](#)

911. 

[Usb Hub Schematic](#) Cy7c65632, cy7c65634 hx2vl™ very low power usb 2.0 hub controller cypress semiconductor corporation • 198 champion court • san jose, ca 95134-1709 • 408-943-2600. Click here to receive the iogear newsletter and / or discounts: stay connected; facebook; twitter - iogear news; twitter - iogear..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

912. [More Raspberry Pi Electronics Experiments – Gertboard and Potentiometer-Controlled LED Cluster](#) More Raspberry Pi Electronics Experiments – Gertboard and Potentiometer-Controlled LED Cluster Posted on February 3, 2013 by rakanalysis One of the things which alerted me to the potential of the Raspberry Pi as an electronics control system was the announcement of the Gertboard before the Raspberry..... Listed under: [LED Projects](#)

913.

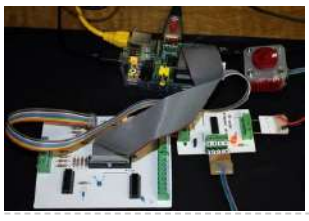
[Interfacing HC-SR04 Ultrasonic Sensor with Raspberry Pi](#) Ultrasonic distance sensors are designed to measure distance between the source and target using ultrasonic waves. We use ultrasonic waves because they are relatively accurate across short distances and don't cause disturbances as they are inaudible to human ear. HC-SR04 is a commonly used module..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

914.

[My Raspberry Pi Powered Garage Monitor](#) Update #1: Garage Monitor Memory Leak: Part 1. Update #2: I should point out that the arm on the switch I ended up using bent so it stopped working after about a month of use. I really need to figure out a way to mount..... Listed under: [Home Automation Projects](#)

915.

[8 Interesting DIY Raspberry Pi Case Ideas](#) The Raspberry Pi is a small, credit-card sized ARM computer that costs a measly $25. For the money you'll get a full system-on-chip computer capable of running a variety of ARM-optimised operating systems, USB and Ethernet connectivity but no case. Future versions of the unit..... Listed under: [How To - DIY - Projects](#)

916. 

[Driving a bi-polar stepper motor with the SN754410NE double H-bridge and a Raspberry Pi](#) Bi-polar stepping motors use only two coils and are easily recognized because they only have four wires. Most unipolar steppers can be used in bipolar mode by ignoring the two centre taps. Because bi-polar stepping motors produce the rotating magnetic field by reversing the current..... Listed under: [Motor Projects](#)

917.

[WeatherPiArduino Weather Board](#) WeatherPiArduino is a weather station controller board designed to interface to Arduino and Raspberry Pi computers. It is an interface board developed by SwitchDoc Labs to allow the user to easily build a fully functioned Weather Station while allowing customization of functions. WeatherPiArduino is derived..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

918.

[Raspberry Pi Face Recognition Treasure Box](#) Overview Face recognition is an exciting field of computer vision with many possible applications to hardware and devices. Using embedded platforms like the Raspberry Pi and open source computer vision libraries like OpenCV, you can now add face recognition to your own maker projects! In..... Listed under: [How To - DIY - Projects](#)

919.

[Mobile Raspberry Pi Computer: Build your own portable Pi-to-Go](#) w, yes, the Raspberry Pi Computer, a credit card size mini PC that only cost $35. There are so many possibilities and uses for these small nano PCs. People have made them into PVRs (personal video recorders), retro gaming machines, weather stations, in-car PCs, jukeboxes,..... Listed under: [How To - DIY - Projects](#)

920.

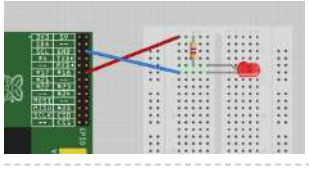
[Remote Controlling a Car over the Web. Ingredients: Smartphone, WebSocket, and Raspberry Pi.](#) At Kaazing, we have been experimenting with using a smartphone as a remote control for quite some time now. Those familiar with our demos may have seen our Zing-Pong demo (which is a "Pong"-style game using smartphones to control the paddles over WebSocket) or our..... Listed under: [Wireless projects](#)

921.

Back in Black – a DIY raspberry pi Boombox: Wire it Up – Power Power The BinB boombox has a different power setup from the prototype - it can be battery powered or AC powered. If you want to run the boombox often on battery, the recommended choice is an SLA (Sealed Lead Acid) battery of good quality. These..... Listed under: How To - DIY - Projects

922.

ICStation 4X4X4 Light Cube Kit for Arduino UNO CSTATION 4x4x4 Light Cube kit uses 64 cuboid LED,and controlled by Arduino. Expansion board uses two 74HC595 shift register chips, using eight I/Os can light the 4x4x4 Light Cube,it's hardware resources needed is less than other 4x4x4 light cubic expansion board(needs 20 I/Os to control)..... Listed under: LED Projects

923. 

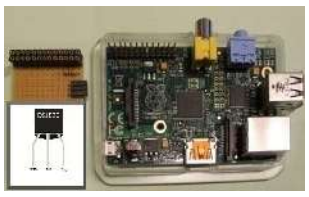
Interface LED with Raspberry Pi Solution Connect an LED (see "Opto-Electronics") to one of the GPIO pins using a 470Ω or 1kΩ series resistor (see "Resistors and Capacitors") to limit the current. To make this recipe, you will need: Breadboard and jumper wires (see "Prototyping Equipment") 1kΩ resistor (see "Resistors..... Listed under: LED Projects

924.

Raspberry Pi – RS232 Serial Interface Options (Revisit) In the previous article Raspberry Pi - Installing a RS232 Serial Port we discussed how to install a RS232 port on the Raspberry Pi. This is a follow up article to suggest a few alternative interface options as the XBit RS232 level-shifter board has been..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

925.

Simulink Offers Easy, Graphical Programming for Raspberry Pi & Arduino Every hardware hobbyist has experienced that painful moment when you smell smoke and discover that it's coming from your hardware project. It's a rite of passage. Wouldn't it be nice if you could test your hardware before burning it? At the Open Hardware Summit, held..... Listed under: How To - DIY - Projects, Raspberry Programmer Projects

926. 

1-wire temperature sensor DS1820 at Raspberry Pi (GPIO directly) To measure the indoor or outdoor temperature with the Raspberry Pi, there are several possibilities. This article describes the version with the minimal amount of external components. This is based on the DS18S20 temperature sensor and the software emulation of the 1-wire protocol. The DS18S20..... Listed under: Temperature Measurement Projects

927.

Raspberry Pi Serial Port Many of the GPIO pins on the Pi have other special uses. The most useful of these are the serial port pins #8 and #10, which are transmit and receive for an RS-232 serial port. By default this port will output diagnostic messages during boot..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

928.

Hacking the Lego EV3: Build Your Own Object Sensor "Eyes" Although the Lego Mindstorms EV3 kit comes with a variety of cool sensors, wouldn't it be awesome to build your own custom sensing device? This project will show you how to create your own unique object sensors for your Lego EV3 controller using basic electronic..... Listed under: Sensor - Transducer - Detector Projects

929. How to detect WiFi access points using Raspberry Pi As you can see – this system is used as a mobile wireless network (WLAN) detection point. A small computer intended to be used for WLAN collection, including from UAVs. Hardware: IBM Power PC 405GPR processor, 64 MB SDRAM, 16 MB of built-inflash, 4 mini..... Listed under: Wireless projects

930.

Multi-Cell LiPo Charging Overview Lithium Polymer Batteries pack a lot of power in a small package. But they can be tricky to charge safely. The Adafruit LiPo Chargers all provide a charging cycle designed to safely charge 3.7v Lithium Polymer cells. But what if your project needs more..... Listed under: Battery Projects

931.

28BYJ-48 Stepper Motor Control System Based On Arduino With ICStation Team introduces to you this stepper motor control system based on the ICStation UNO compatible with Arduino. It uses a ULN2003 chip to drive it. The working voltage is DC5V. It is widely used on ATM machine, inkjet printer, cutting plotter, fax machine, spraying equipment,..... Listed under: Motor Projects

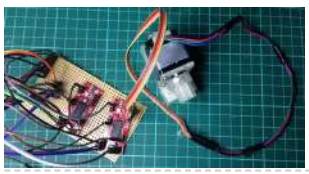
932.

Touch Pi: Portable Raspberry Pi Overview In this project we're building a portable Raspberry Pi using the model A+, PiTFT 3.5" display, Powerboost 500C and a 2500mAh lithium polymer battery. We designed this very simple case in CAD - It's a two part enclosure that's fasten together with screws. All the..... Listed under: Development Board - Kits Projects

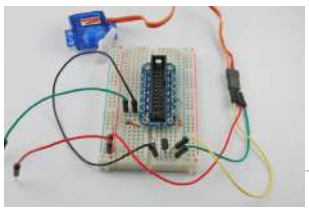
933. Quick2Wire Interface Board – Assembly and Troubleshooting TESTS (1) On the Quick2Wire boards there is a 3-pin male header with pins for 5V, 3.3V, GND. I attached the test circuit to 5V and GND — it glowed as it should. Same for 3.3V and GND. So I decided that the board was..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

934.

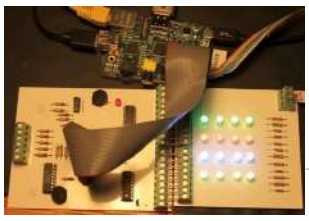
Know all about Raspberry Pi Board Technology The Raspberry pi is a single computer board with credit card size, that can be used for many tasks that your computer does, like games, word processing, spreadsheets and also to play HD video. It was established by the Raspberry pi foundation from the UK..... Listed under: Development Board - Kits Projects

935. 
Control stepper motors with Raspberry Pi and node.js Continuing the journey on how to control things with node.js on the Raspberry Pi I set up 2 stepper motors and controlled them in real time with Hydna. You can can read futher on how to install Hydna on Raspberry Pi here. The to pins..... Listed under: Motor Projects

936.
Interface I2C with the Raspberry Pi Note: Full source (still not finished) is available github.com/drcrane/raspberryrfid. The Raspberry Pi has a few different interfaces available to it, one is I2C (a protocol created by Philips and used in many places, it is the basis of VESA DDC!). I had the opportunity recently..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

937. 
Raspberry Pi GPIO driving Servo I have experimented with GPIO on the Raspberry Pi, just turning an LED on and off here. But since then Ben Croston has improved the RPi GPIO Python library to do most of the work in C and I can confirm that it is a..... Listed under: How To - DIY - Projects

938.
Raspberry Pi B+ for Sound source Still I need good PC for ripping and have to buy source from internet(online). if do you have Good DAC probably reproduce good sound from Raspberry Pi B+ Music server.Raspberry Pi B+ is very small PCB actually small PC for kids in UK.but for Audiophile..... Listed under: Sound - Audio Projects

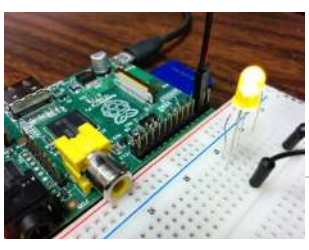
939. 
Some fun with 16 RGB LEDs and a Raspberry 3.14159 RGB LEDs consist of a red, a green and a blue LED conveniently encapsulated in one package. Theoretically one such should be able to produce any colour of the rainbow, but I have restricted my project - for reasons explained later - to just red,..... Listed under: LED Projects

940.
Lunchbox Internet Radio Guide What I've made is a radio with 6 buttons and a 20x4 LCD screen. There is an "ON" button, and "OFF", "BACK", "PLAY", "STOP" and "NEXT". It is connected to the internet via WiFi, and it powered by a USB hub connected through a Pi-Supply..... Listed under: Radio Projects

941.
Connecting SNES sockets to the Raspberry Pi: An assembly guide In a previous post, I described my idea of a universal console with the Raspberry Pi. I presented, what I called, the SNESDev-RPi, which is an SNES-controller interface for the Raspberry Pi. A core element of this interface is a SNES-adapter PCB that I recently..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

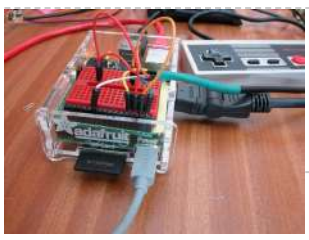
942.
Raspberry PI Serial Port and Breakout Board erial port to the Raspberry PI and breaks out some of the PI's pins for experimentation. The interface board was designed to be simple and used for initial experimentation. It can be built on a single-sided PCB using home-made PCB fabrication methods. KiCad source files..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

943.
TNC-X for Raspberry Pi (Packet radio) AX25 TNC-Pi is a special version of TNC-X designed to interface directly with the Raspberry Pi computer. It can connect to the Pi either via the Pi's serial port, or via the I2C protocol. In the latter case, a single Pi can support multiple TNC-Pi's at..... Listed under: Radio Projects

944. 
Using the Raspberry Pi GPIO with Python So you got your Raspberry Pi, installed an OS and using it just like your computer. Great! Now what? You didn't buy a Raspberry Pi just to replace your computer, did you? Well, Raspberry Pi can do a lot more... much more than your computer..... Listed under: Development Board - Kits Projects

945. Raspberry Pi – Dual Element Homebrew Boiler/HLT and Fermentation Fridge Controller The purpose of this device is to allow someone who makes Homebrew Beer using the "All Grain" method, to control the temperature and timings of various parts of the beer making process when used in conjunction with a home

made boiler. However, the physical device,..... Listed under: Home Automation Projects

946. 

NES Controller on the Raspberry Pi Part 1: The Hardware & Driver Some time back, I joked that the Raspberry Pi's GPIO port really stood for Game Port IO... So to make that joke come true, I present a way of interfacing the NES Joysticks to the Raspberry Pi. First you..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

947.

Banana Pi BPiDuino UNO Board Module, compatible with for Arduino UNO, available for Raspberry Pi Quick Details Package: plastic bag sealed; carton box packed; Model Number: BPI UNO Type: Drive IC Brand Name: BPI Place of Origin: Guangdong, China (Mainland) Dissipation Power: 3W Operating Temperature: -10 ~ 65°C Supply Voltage: DC 5V Application: Computer Specifications Banana Pi BPiDuino UNO Board..... Listed under: Development Board - Kits Projects

948.

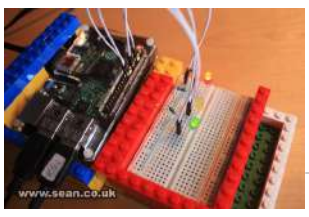
Expansion Shield for RaspberryPi compatible with Arduino Let's expand RaspberryPi functionalities with a shield that is compatible with the Arduino pinout and with an onboard analog to digital converter with 16-bit resolution. Further expansions that we will present in the future will allow you to add a DAC, a number of additional..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

949.

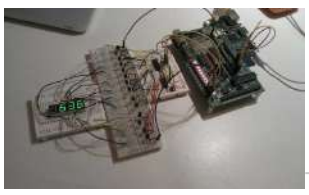
ICStation 16 Music BOX DIY Kit Sound Module 1.Features 16-tone box under your control, arbitrarily issued 16 kinds of interesting analog sound, both an electronic toy can also be used as a doorbell or alarm. 2.A suite of profiles: Kit Model: BOX-16 Operating voltage :4.5-5V PCB size: 48mm (length) * 42mm (wide) Control..... Listed under: How To - DIY - Projects

950.

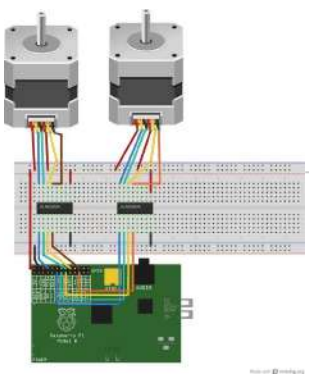
Switching mains electricity with a Raspberry Pi and a remote control Home electronics can open up a new dimension in home automation especially when used with an Arduino or Raspberry Pi. There is however a very real danger when using mains electricity, including risk of electricution and danger of electrical fires if the components are not..... Listed under: Home Automation Projects

951. 

Make a torch and burglar alarm in Scratch with the CamJam EduKit and ScratchGPIO First steps Like many projects, this one began with Lego. To stop the breadboard sliding all over the place, I created a Lego housing for it and the Raspberry Pi that would keep them conveniently together. My Raspberry Pi is in a PiBow case, which..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

952. 

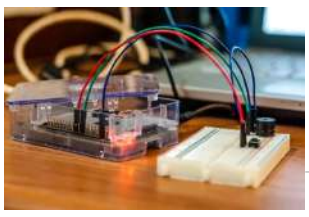
What is a serial-to-parallel shift register? A serial-to-parallel shift register (or SIPO: Serial In Parallel Out) lets you take a sequence of signals on one output, and split them up into several separate outputs. For example, if you don't have enough GPIO pins on your Raspberry Pi, Arduino, or other computer/microcontroller,..... Listed under: How To - DIY - Projects

953. 

Raspberry Pi Motor Controller Overview An AVR, typically an ATMega168P, is controlled from the Pi via the 3.3V UART, and provides the PWM signals to the Motor Driver. Features Controlled via the UART on the Pi GPIO Header. Up to 2A bi-directional current per channel at up to 46V..... Listed under: Motor Projects

954.

Lighting an LED using a Breadboard & a Raspberry Pi Lights, Jumpers & the Resistance – Jumper wires are typically 22 gauge solid-core wires with insulation pre-stripped and readied for insertion in or out. Resistors resist the flow of electrical current, thereby controlling WHERE and HOW FAST it flows. [Thought experiment: If controlling water, using..... Listed under: LED Projects

955. 

Make an alarm clock with a Raspberry Pi Breadboard If you're new to electronics and the Raspberry Pi (RPi), you might not be familiar with the breadboard. The idea of the breadboard is to allow you to connect up electrical components without needing to solder wires or any other elaborate procedure. It's basically..... Listed under: Clock - Timer Projects

956.

AngelBlocks – Maker Kit Introduction AngelBlocks is an open source smart home building block system that is suitable for a wide range of users. Homeowners with little or no technical skills will find AngelBlocks intuitive and easy to use. Makers, hackers, an developers will love AngelBlocks because they can..... Listed under: Home Automation Projects

957.

[Super Mega Ultra Pi Boy 64 Thingy Build] Getting Started! I had recently bought an original Gameboy DMG from Good Will for a whopping $5.00, condition unknown. Taking a gamble, I purchased it and took it home to find that it had severe damage caused by a battery that exploded and leaked all..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

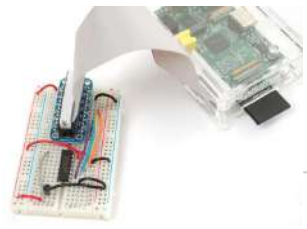
958.

[Raspberry Pi gains Wolfson HD audio card] Newark Element14 and Wolfson have launched an HD-ready Wolfson Audio Card for the Raspberry Pi with 192kHz sampling, MEMS mics, and I/O including S/PDIF. The Wolfson Audio Card extends and enhances the Linux-ready Raspberry Pi's audio features beyond its native HDMI output with onboard HD..... Listed under: [Sound - Audio Projects]

959.

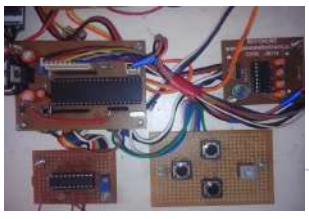
[ULN2803 8-channel RC Servo Port for Raspberry Pi] Bring in some muscle to your output pins with 8 mighty Darlingtons! This driver chip contains 8 drivers that can sink 500mA from a selectable 5V or DC input voltage supply and has kickback diodes included inside for driving coils. This will let your little..... Listed under: [Motor Projects]

960. [Monitoring Room Temperatures with Moteino's and Raspberry Pi] Introduction Following on from using a Raspberry Pi to capture the electricity consumption of my home, I have over the last 2 years installed Solar Thermal Hot Water panels and very recently Solar PV. This meant that I had an opportunity to create something I..... Listed under: [Temperature Measurement Projects]

961. 

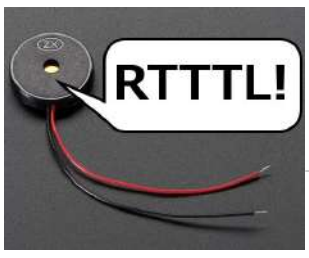
[Send Raspberry Pi Data to COSM] The combination of connecting a Raspberry Pi to COSM makes creating a internet of things much easier than it has been in the past. The Pi with it's easy access to ethernet / WiFi and COSM's drop dead simple usability will graph all sensor data..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

962. [Fish Feed Time – Wireless Socket Control with the Raspberry Pi] Overview Being a bit of an unecessary geek, I've decided to pimp out my fishtank with a Feeding Time button! "What's one of those?" I hear you ask! Well... As it's a Marine Reef tank, it's a bit fiddly to feed some of the corals..... Listed under: [Wireless projects]

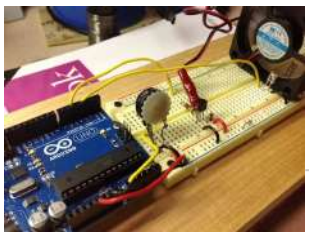
963. 

[Motor Protection against Single Phasing and Overheating] The rise in temperature level of a motor during its operation beyond a permissible limit is known as overheating. The causes of motor overheating are motor overloading, distortion in the supply voltage, impaired cooling capability, unbalanced supply voltages etc. Because of overheating, we can face..... Listed under: [Motor Projects]

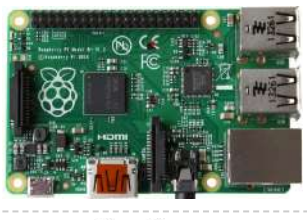
964. [Quick2Wire Analogue Board – Connecting to Raspberry Pi] This is a short report on how to connect Quick2Wire's analogue board directly to a Raspberry Pi. The key is the pinout for for the six-pin boxed headers on the Q2W board. I ignored the 5V and Int lines, running lines only for 3.3V, GND,..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

965. 

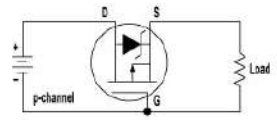
[Piezo Ring Tones with Raspberry Pi] The ringtone text transfer language (RTTTL) is a way to represent music data for play on older mobile phones. The format was created by Nokia for thier phones, but it also works with GPIO pins and a piezo buzzer. This project shows how to use..... Listed under: [Sound - Audio Projects]

966. 

[Hooked on Arduino & Raspberry Pi] Infrared Fan Speed Control This project demonstrates using an infrared light beam to measure the speed of a fan, and PWM to adjust the speed to a preset value. I used a small 12 Vdc fan from a PC CPU heat sink. It will run..... Listed under: [Wireless projects]

967. 

[Raspberry Pi Launches New Model B+] The Raspberry Pi Foundation today announced the final revision of the original Raspberry Pi development board. The Raspberry Pi development board since its introduction has actually sold over 3 million units globally, indicating the undoubtable success of the hardware platform. One of the major reasons..... Listed under: [Development Board - Kits Projects]

968. 

[Raspberry Pi B+ Power Protection Circuit] The circuit functionality is mostly obvious. There is polyswitch F1, a self-resetting fuse which protects the RPI from overcurrent condition. There is the Transient Voltage Suppressor (TVS) diode D5 which protects the RPI against static discharge and possibly overvoltage condition. However, the function of mosfet..... Listed under: [Other Projects]

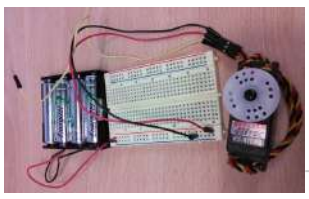
969. DIY диммер: guidebook to components n the recent past we shar the complete set of gerber-files with our expensive readers. That all interested persons ha possibility to order to themselves printed-circuit boards. As it are inexpensive, as it were ma by us. Today we taken the following step. We published..... Listed under: How To - DIY - Projects

970.

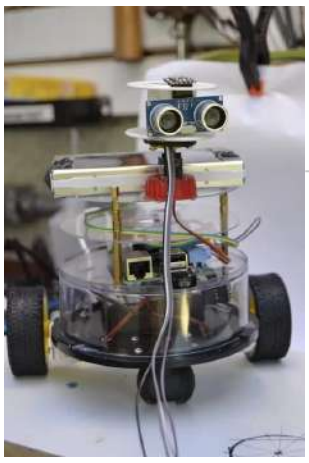
Solder Pen, PCB Circuit, Python Programming Solder Pen I had some color Sharpies, which never worked very well, even when I first got them. I just tried them, and all but one, would not even write. I threw them in the trash. Later, I got them out of the trash because..... Listed under: Development Board - Kits Projects

971.

IO Pi Introduction: The I2C address bits are selectable using the on-board jumpers. The MCP23017 supports up to 8 different I2C addresses so with two MCP23017 devices on each IO Pi you can stack up to 4 IO Pi boards on a single Raspberry Pi giving a..... Listed under: Development Board - Kits Projects

972. 

Controlling a Servo Motor Assembly The servo motors have three pins, two for power: red(+) and black (-), and one for control. Because the servo motor draws too much energy, we need to use the batteries to power the servo (the Raspberry Pi doesn't have so much power. if..... Listed under: Motor Projects

973. 

Raspberry Pi CD Box Robot English: This project is a work that is taking on many weekends. My son, Gabriel, watched the movie "Wall-E" and proposed that we built a similar robot. I see this model in Dx.com and get inspired by it. We use some scraps we find here..... Listed under: Robotics - Automation Projects

974.

Raspberry PI Safe Breakout I have always wanted to access the Rapsberry PI Gpio pins in a safer manner. Those are not 5V tolerant, and need a level shifter. I came across this really nice level translator chip from TXB0108 from Texas Instruments. It is a bidirectional 3.3 to..... Listed under: Security - Safety Projects

975.

Physical computing with Raspberry Pi Difficulty: beginner This tutorial will help you to receive input to your Pi from physical switches and buttons and to debounce if necessary. It will show you how to automatically run a program when a button is pressed (a GO button for a robot, for..... Listed under: Calculator Projects

976.

Easy Temperature and Humidity on Raspberry Pi Step 1: Connection EzTemp uses the serial port on your Raspberry Pi to communicate. Identify the serial pins on your Raspberry Pi. Then connect: RPi GND to EzTemp GND. RPi Tx to EzTemp Rx. RPi Rx to EzTemp Tx. RPi 3.3V to EzTemp 3.3V. Notice..... Listed under: Temperature Measurement Projects

977.

Arduino-Based Blue Box (Phone Phreaking) Step 1: Arduino IDE and Library Setup The advent of the Arduino put power into the hands of the same type of folks who originally designed the first blue boxes. We can write our own micro-controller code, use easily obtainable Radio Shack parts to design..... Listed under: Phone Projects

978.

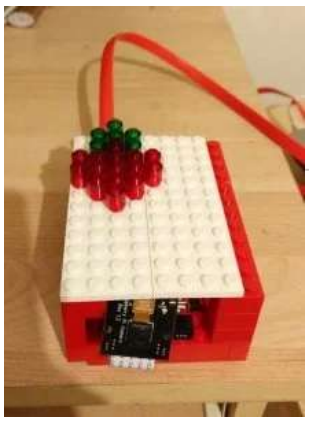
Tweeting coffee machine using Raspbery Pi Observing that LED will give us knowledge if it is being used or not. I am using a Light Dependent Resistor (LDR) as eyes for the Raspberry Pi. The LDRs change their resistance as per the intensity of light falling upon them. Our goal is..... Listed under: Home Automation Projects

979. ramanPi – The 3D Printable Raspberry Pi Raman Spectrometer ramanPi is looking for developers!!! ****If you have Python, pyQt4, matplotlib, signal proces optics, raman spectroscopy or FPGA experience contact dev @ ramapi .org! Or go to dev . ramanPi . org and sign up to the developer forums! What I want to

do: Build…... Listed under: Metering - Instrument Projects

980.

Raspberry Pirate Radio This simple hack turns your Raspberry Pi into a powerful FM transmitter! It has enough range to cover your home, DIY drive-in movie, a high school ball game, or even a bike parade (depending on the stragglers). PiFM software not only boldly enhances the capability of…... Listed under: Radio Projects

981. 

[Project] Raspberry Pi Powered WiFi Streaming Camera Scope: To build a Raspberry Pi powered video camera, capable of streaming over a home wireless network. BOM: – Raspberry Pi (With Raspbian OS) – RPi compatible Wifi Dongle (List here) – Camera Module (Here) – Wifi enabled PC with VLC media player Instructions: Connect…... Listed under: Video - Camera - Imaging Projects

982.

Browse Anonymously with a DIY Raspberry Pi VPN/TOR Router Surf the Internet securely with your very own portable WiFi VPN/TOR router. You can configure a Raspberry Pi with Linux and some extra software to connect to a VPN server of your choice. The VPN connection encrypts your internet traffic so that hackers and spies…... Listed under: How To - DIY - Projects

983.

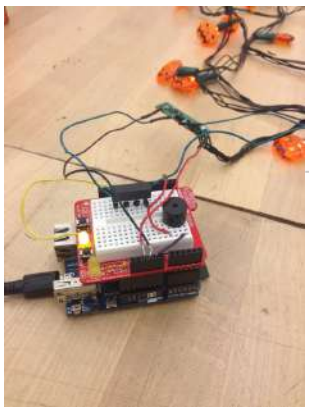
PWMcontrol on Raspberry Pi: installation and first test on Hatalógico board Vendor's Description: Finally I got my first test with Hatalógico and it looks promising: just out of the box PWM working. That means servos working right in the same platform as a powerful linux board! If you don't know the Hatalógico board for Raspberry Pi,…... Listed under: PWM Projects

984.

"beet box" raspberry pi style Step 1: Thing you need the thing's you will need, Any vegetable that is able to fit inside a hole raspberry pi power supply audio amplifier capacitive sensing board wooden enclosure (like on the image above) Step 2: Image if components these are all the…... Listed under: Home Automation Projects

985.

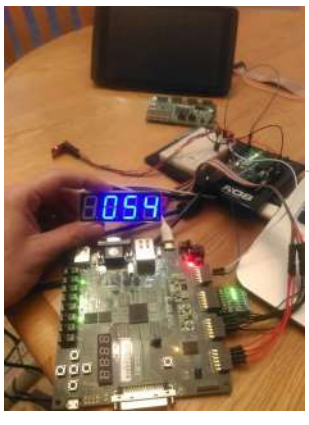
Getting Started with Phidgets on the Raspberry Pi This instructable is an adaptation of one of our blog posts. Before beginning, you'll want to have a few things in place. You'll need: A functioning Raspberry Pi (obviously). A separately powered USB hub, since the Raspberry Pi isn't capable of delivering enough power on…... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

986. 

Controlling your Christmas lights with Text Messages Step 1: Components needed An Arduino Yun (Wifi Enabled!) - You could use another Arduino with a Wifi Shield though. A Protoshield with (or without) a tiny breadboard a regular breadboard will work as well, but will be less compact. If you want to solder…... Listed under: LED Projects, Wireless projects

987.

How to drive Dynamixel AX-12A servos (with a RaspberryPi) I decided to use some Dynamixel AX-12A motors for a project, and ended up having to code a library for them, so I figured I would share what I learned. Despite being a bit more expensive, this motor has a couple of advantages over the…... Listed under: How To - DIY - Projects

988. 

WiFi Enabled Arduino – Interfacing with web APIs Are you familiar with Arduino, but are looking for a little more connectivity in your projects? This Instructable goes over a new (and cheap) wireless module that has hit the embedded world hard - the ESP8266. This little module is a perfect way to hook…... Listed under: Wireless projects

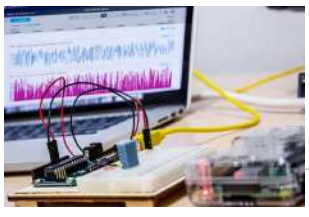
989.
[Knit an LED Cuff] This instructable uses circuit knitting and is written specifically for knitters. We'll cover how to create a circuit that uses blue and yellow LEDs, with instructions for hand and machine knitting. Electronic machine users can download the pattern file below to CNC print the knitting..... Listed under: [LED Projects]

990.
[Raspberry Pi remote webcam] This will allow you to create a remote webcam for your Raspberry Pi so that you can view it from any computer on the local network. For this instructable you will need: • Raspberry Pi with an Whezzy Raspbian installed and internet connection established •..... Listed under: [Video - Camera - Imaging Projects]

991.
[Adding an external power supply to a cheap USB hub] One day I found myself in the need for a USB hub with an eternal power supply but when I went to a shop I verified they can be quite more expensive than the ones that don't ha\ve external power supply. No big deal, "I'll..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

992.
[Building robots with Raspberry Pi and Python] The goal of this tutorial is to help you begin programming with Python to control your Arduino robots with a Raspberry PI. We will go over the basics like installation and some simple examples to control your robot from a Python GUI from Raspberry PI. Step 1: Parts list..... Listed under: [Robotics - Automation Projects]

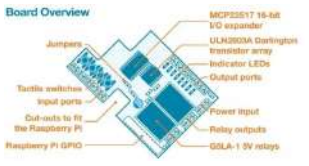
993.
[Read and write from serial port with Raspberry Pi] In this tutorial we will see how to use the serial port on Raspberry Pi. We will use the serial port available on Raspberry with a RS232/TTL 3-5,5V adapter and a USB-serial adapter. By default the Raspberry Pi's serial port is configured to be used..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

994. 
[Weather station using SAMIIO, Arduino, and Raspberry Pi] This article demonstrates using SAMI with simple, off-the-shelf sensors and hardware. Specifically, we will be gathering climate data from a low-cost temperature sensor and relaying that data to the cloud via SAMI APIs. From there, we can analyze our collected data in real-time or historically..... Listed under: [Wireless projects]

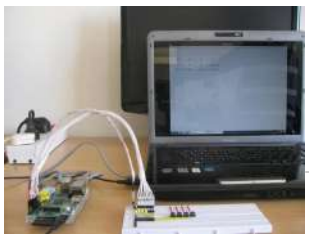
995.
[Adafruit PiTFT – 2.8" Touchscreen Display for Raspberry Pi] Overview Is this not the cutest little display for the Raspberry Pi? It features a 2.8" display with 320x240 16-bit color pixels and a resistive touch overlay. The plate uses the high speed SPI interface on the Pi and can use the mini display as..... Listed under: [LED Projects]

996.
[Raspberry Pi simple blog server.] Step 1: Name change to protect the innocent. You will want to change the name of your Raspberry Pi or you might get another server from the web. Also I am sure you have already set up your router to set the raspberry pi address..... Listed under: [How To - DIY - Projects]

997. [PSoC 4 Pioneer Kit Community Project#083 – Raspberry Pi Integration] We have been targeting two communities in the 100 days projects, Arduino and Pmod. In today's example we will be adding support for the wildly popular Raspberry Pi hardware. In this example we will have the Pioneer board communicate to the Raspberry Pi. The Raspberry..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

998. 

[Raspberry Pi, PyFace Digital, the lost documentation, I found it finally] The Raspberry PI or R-pi from http://www.raspberrypi.org/ is well known these days. It is not an accident that I have one, I have been doing Linux stuff since 1991, and professionally since 1996 I can not skip over these developments, have to keep up with the new..... Listed under: [Development Board - Kits Projects]

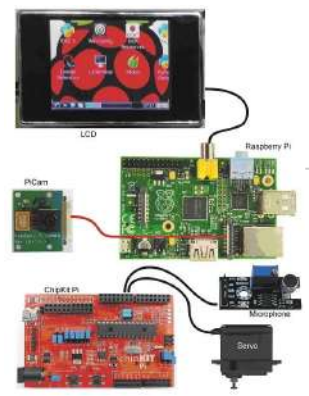
999. 
[Controlling Hardware using GUI in Raspberry Pi] The Graphical User Interface (GUI) helps the user to communicate with the system effortlessly. The GUI is considered as the front end of an application. In a Linux operating system each hardware device is represented as a file. The device can be controlled by simply..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1000.
[How to Translate SMS Text Messages into Morse Code Using GSM/GPRS Mobile Kit] Contents Introduction Step 1: Connection Step 2: The code Links and Documentation Introduction Go to index This tutorial allows the user to translate SMS text messages into morse code. When the module receives a SMS it will reproduce it in morse code through the buzzer..... Listed under: [GPS Based Projects]

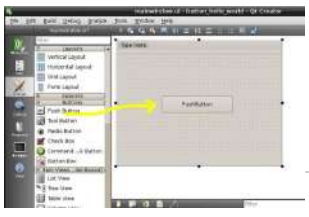
1001. [How to Get GUI on Raspberry Pi] In this project the Raspberrypi board is booted with the Ubuntu OS and is connected to the Ethernet port of a Windows7 PC The board is connected to the internet connection as explained in the project how to connect the Raspberrypi to the internet. The..... Listed under: [Interne Ethernet - LAN Projects]

1002.

[Audio distribution with Raspberry Pi](#) At a glance use a Raspberry Pi to send and receive audio streams over the network streaming is based on standard RTP streams uncompressed audio streaming over ethernet point-to-multipoint broadcasting uses PulseAudio Note: This guide has been written in 2011. Since this time, the software..... Listed under: Sound - Audio Projects

1003. 

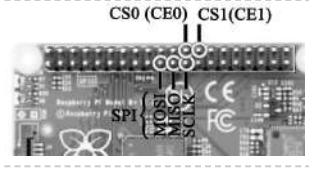
[The Ultimate Raspberry Pi Bundle – SoftballCam – 2](#) This blog is the second installment of a review of the Ultimate Raspberry Pi Bundle provided by element14. I have been waiting for parts and struggling a bit with getting everything working, but finally all electronics are kluged together and functional. Also all software for..... Listed under: Raspberry Programmer Projects

1004. 

[How to Create Buttons in Qt](#) In this project the Raspberrypi board is loaded with Ubuntu and is remotely accessed using VNC. The Raspberrypi board is also connected to the internet. Downloading and installing the fourth version, QT4 using commands are already discussed in a previous article. There is another article..... Listed under: How To - DIY - Projects

1005.

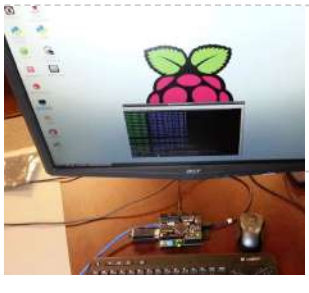
[picoReflow](#) Raspberry Pi Supported SPI driven Cold-Junction K-Type Thermocouple converter: MAX31855 MAX6675 GPIO driven Solid State Relays (230V heating/fan) PWM driven MOSFET (12V cooling) Python control daemon (running on the Pi) HTML5/Websocket OS independent multi user web-client Live Monitoring & control Browser based Profile/Curve Management +..... Listed under: How To - DIY - Projects

1006. 

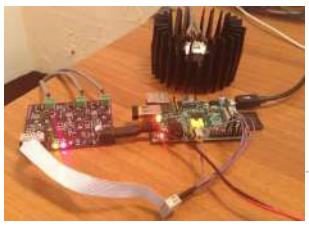
[Raspberry Pi Sensors](#) In this article, by Rushi Gajjar, author of the book Raspberry Pi Sensors, you will see the basic requirements needed for building the RasPi projects. You can't spend even a day without electronics, can you? Electronics is everywhere, from your toothbrush to cars and in aircrafts..... Listed under: Sensor - Transducer - Detector Projects

1007.

[How to Install Qt in Raspberry Pi](#) The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the powerful ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers,..... Listed under: How To - DIY - Projects

1008. 

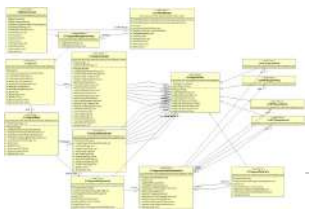
[LOGI Pi Quick Start Guide](#) Overview This is an out of the box quick start guide that will give you the essentials of preparing and running the LOGI-Apps demos on your LOGI-Pi and Raspberry Pi. The guide will guide you through the following items to get you up and running..... Listed under: Raspberry Programmer Projects

1009. 

[Controlling a RGB LED attached to a Raspberry Pi through Android](#) Project Description I need to be able to control turning on and off an RGB LED utilizing the Raspberry Pi. I also should be able to turn it on and off using an Android device. Design The design is made up to utilize three different..... Listed under: LED Projects

1010.

[Raspberry Pi 2 Kraft Case](#) I received my long-expected Raspberry Pi a few days ago. I just couldn't wait to try out my crazy ideas on it. But wait, what if Pi can go portable. What if Pi can still rock on when a power source is unavailable. Problems to..... Listed under: LCD Projects

1011. 

[MBusConnector](#) Introduction IoTSyS is an integration middleware for the Internet of Things. It provides a communication stack for embedded devices based on IPv6, Web services and oBIX to provide interoperable interfaces for smart objects. The IoTSyS middleware aims providing a gateway concept for existing sensor and..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1012.

[Tripod Camera Mount for Raspberry Pi](#) This may seem like it already exists, but I couldn't find it anywhere. So, I made it myself: a camera mount for the Raspberry Pi that you can easily mount onto any standard tripod. Step 1: Create the 3D Model I looked around for an..... Listed under: Video - Camera - Imaging Projects

1013. [e-Health Sensor Platform V2.0 for Arduino and Raspberry Pi [Biometric / Medical Applications]](#) IMPORTANT: The new generation of the eHealth Sensor Pla...n is called MySignals. You can find below a brief description and a comparative between the old eHealth v2 Platform and MySignals. If you want to go to the

eHealth Tutorial just click here. Discover MySignals, the..... Listed under: Medical - Health based Projects

1014.

How to Configure Raspberry Pi The Raspberry pi is a low cost single board minicomputer which can be used for learning the computer basics, programming and easy to interface with the embedded systems. The Raspberry pi is a mini computer which is designed in a single board with all the..... Listed under: How To - DIY - Projects

1015.

How to drive a Character LCD display using the Raspberry Pi In this tutorial we'll take you through how to connect a 16x2 LCD display up to your Raspberry Pi using GPIO pins. Being able to display a message on the LCD is not only very cool but can be pretty useful too, for example in..... Listed under: LCD Projects

1016.

Raspberry Pi and Arduino Serial Communication Setup and Connections Connect the output of the Arduino TX pin to a voltage divider. The output of the voltage divider is then connected to the RPi GPIO pin # 10 (GPIO 15). The voltage divider drops Arduino TX voltage from 5V to 3.3V. In..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1017.

Named Pipe Example Using Raspberry Pi The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the ARM11 processor which runs on 700 MHz at its core. The operating systems like Archlinux ARM, OpenELEC, Pidora, Raspbmc, RISC OS and..... Listed under: Blog, Other Projects

1018.

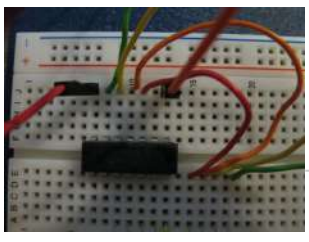
JTAGulating the Raspberry Pi 2 This instructable will cover how to get a root recovery console on a Raspberry Pi 2 with a NOOBS SD card using a Jtagulator, PuTTY, and three wires. It is thanks to the Instructables Raspberry Pi Build Night sponsored by Instructables and the Rabbit Hole..... Listed under: Raspberry Programmer Projects

1019.

Voice– and SMS–Enabled Light Sensor Using Raspberry Pi and Twilio Overview The Hacker School space for our batch had two restrooms: one attached to the main work area, and one downstairs. We thought it would nice to know if the bathroom is occupied before taking the time to walk down. Our project makes it possible..... Listed under: Sensor - Transducer - Detector Projects

1020.

Using a keypad with Raspberry Pi I got two keypads from Jameco.com that I wanted to use with my Raspberry Pi. Turns out it's quite easy, as long as you know what the pinout structure is for the keypad. This instructable will take you through the steps I had to go..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1021. 

Using a shift register with Raspberry Pi This instructable will attempt to explain, in simple terms, what a shift register is, and how you can use it with the Raspberry Pi to expand the GPIO port by running eight outputs with just four GPIO ports. To start with, what is a shift..... Listed under: LED Projects

1022.

Raspberry Pi & Soundmodem – It works!! (Part 01) Many months ago I was working on getting a Raspberry Pi working for APRS work. I was experiencing a ton of issues with getting soundmodem to decode aprs signals that were known to be good (ie. ideal recording played back as an MP3..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1023.

Raspberry Pi Fridge Minder: receive an email when the door is opened The kit comes with project cards and a link to download the accompanying Python scripts. And projects already include a light meter and email notifier, so I decided to combine these two projects into one and make something that will send an email whenever the..... Listed under: Home Automation Projects

1024.

RasTherm – A Smart Thermostat built on the Raspberry Pi This page presents my implementation of a smart thermostat using the Raspberry Pi board as the controller, with an added Pi Plate expansion board. This thermostat is controlled using a web page interface, so it can be controlled via any personal computer, smart phone or..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1025.

1. The Pi Plane Project summary for the curious Commercial aircraft in Australia (and a lot of the world) periodically transmit their location and the altitude. Aircraft with ADS-B determine their position using GPS; and broadcast that position along with identity string, altitude (plus other useful information such as speed). Using some..... Listed under: Video - Camera - Imaging Projects

1026.

Raspberry Pi 3×3 LED Cube About a month ago my dad bought a soldering iron and we both learnt to solder by making an LED cube controlled by an Arduino. It was a cool project to show my friends and really easy to build so I have decided to make..... Listed under: LED Projects

1027.

Raspberry Pi & Arduino: a laser pointer communication and a LDR voltage sigmoid Plugging the laser module on Arduino Isn't easy to plug a module when you have no datasheet or some wiring schemes, the chances are that you'll probably burn it if you provide a current greater than the supported. The module I have was bought on..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1028.

Raspberry Pi Controls LEGO Power Functions Train Project Description LEGO Power Functions RC infrared control is specified in LEGO Power Functions RC v120.pdf But I wanted to know what my controller (8879 LEGO Power Functions IR Speed Remote Control) was actually sending. So I hooked it up to a scope. Right STOP..... Listed under: Wireless projects

1029.

Raspberry Pi AirPlay Tube Radio Vintage tube radios are nostalgic. The crackle of the game on the after dark high powered AM station from 500 miles away. The smell of the tubes and the warmth of the tones. They remind us of simpler times. Times when families sat together -..... Listed under: Radio Projects

1030.

Raspberry Pi Mobile Media Center with Smartphone Control Our main ideas of a perfect mobile media center are: - watch videos or listen to your music anywhere (only power supply and a monitor/projector for videos required) - easy control with your smartphone - simple setup for non-programmers - great sound and video quality..... Listed under: Phone Projects

1031.

Simple way to control 12V DC Motor using Raspberry Pi's GPIO port and NPN transistor I needed to control a DC motor from my Raspberry Pi's GPIO port as part of my time-lapse dolly project. I had to be able to turn the motor on for approximately 150ms which would in turn move the dolly along by 3mm. Parts 12VDC..... Listed under: Motor Projects

1032.

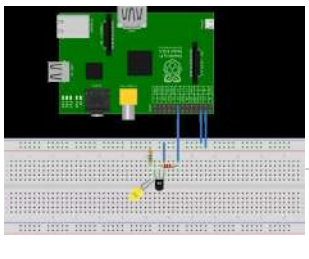
Best Raspberry Pi home automation tutorial: Web based The Internet Of Things is the most trending technology today that stands alongside wearables and robotics. It is a very simple concept where devices in our home or wherever they are , have the capability to communicate with each other via the internet.Usually sensors are..... Listed under: Home Automation Projects

1033.

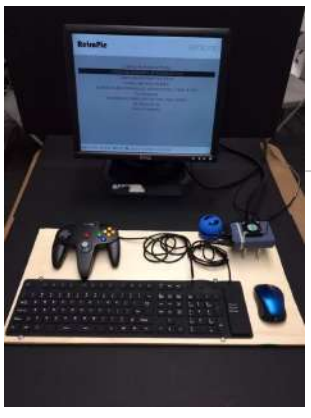
Digital Music Stand: Raspberry Pi + Touchscreen IMSLP is one of the greatest things to happen in the classical music world in recent memory. For those who don't know, IMSLP.org is an online library of any and all sheet music that is no longer under copyright protection. You can find pretty much..... Listed under: Sound - Audio Projects

1034.

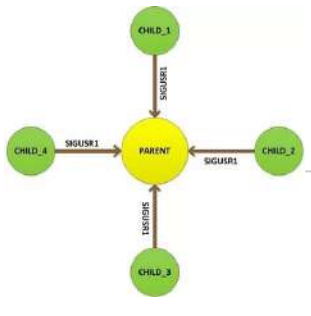
Hello World Program using Qt in Raspberry Pi Installing the QT in Raspberry pi is very easy using the command line, but it will take 30 minutes to 4 hours to finish the installation depending upon the speed of the internet connection. Downloading and installing the fourth version, QT4 using commands are already..... Listed under: Raspberry Programmer Projects

1035. 

Debug GPIO with LED During the daily device driver development routine, we often need to understand the behavior of the GPIO pins to understand if there is I2C traffic or if our driver is handling the coming interrupts and so on. Sometimes is not enough to mount the debugfs..... Listed under: LED Projects

1036. 

[Raspberry Pi RetroPie Gaming Station (Optimized for N64)] Do you want to relive your N64 childhood days or like older games and want to play Zork? How are we going to do this you say? Well, this tutorial is for you! We are going to build a RetroPie Gaming station using a Raspberry..... Listed under: [Game - Entertainment Projects]

1037. 

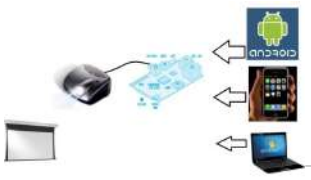
[How to Read Inputs Using Signal in Raspberry Pi] The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberrypi board is powerful enough to run large operating systems like Linux, Mac and Windows. Linux operating systems especially..... Listed under: [How To - DIY - Projects]

1038.

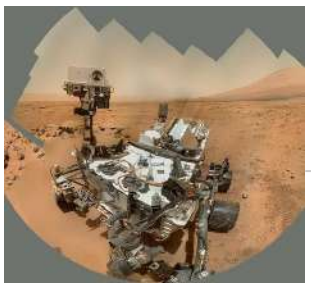
[Python Web Server for your Raspberry Pi] You know some basic Python or you want to learn some and you want to make a website, a web server, a web crawler, etc. - But where do you start? Services like Heliohost or Vlexofree are great for free Python website hosting, but they..... Listed under: [Raspberry Programmer Projects]

1039.

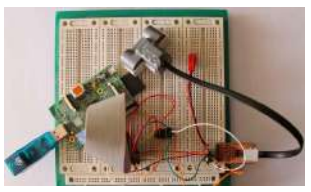
[How to Use Timer in Raspberry Pi] The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the powerful ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers,..... Listed under: [Clock - Timer Projects]

1040. 

[Connect Raspberry Pi to Projector or TV] When we have a meeting in a meeting room, we need to connect our laptop to a projector to show our desktop. But sometimes, several persons need to show their desktop, they need to change their laptop. This is complex and waste some time. Currently,..... Listed under: [Wireless projects]

1041. 

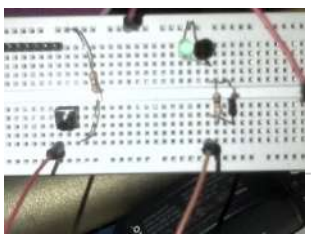
[Raspberry Pi Sensor and Actuator Control] Typically as a programmer you will work with data on disk, and if you are lucky you will draw pictures on the screen. This is in contrast to physical computing which allows you as a programmer to work with data sensed in from the real..... Listed under: [Sensor - Transducer - Detector Projects]

1042. 

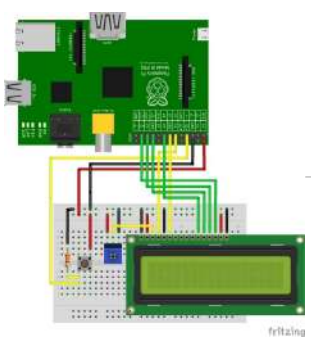
[How to connect a Lego Mindstorms NXT Ultrasonic Sensor to the Raspberry Pi] Abstract Directly connect a Lego Mindstorms NXT Ultrasonic Sensor to a Raspberry Pi. A TCA9517 I2C bus buffer and an additional GPIO pin for SCL is necessary. A short C++ program to read the measured distance is provided. Introduction Raspberry Pi (Pi), despite some shortcomings,..... Listed under: [Sensor - Transducer - Detector Projects]

1043.

[Bartop Mini Retro Arcade – Raspberry Pi and Customised Icade] "Approaching" middle age, wanting an excuse to play with a Raspberry Pi, and having great memories of 80s games (mainly spectrum, sega master system, neo geo, and Atari ST) i decided to build a mini arcade machine / retro emulator. Hopefully some of the things..... Listed under: [Game - Entertainment Projects]

1044. 

[Servo Motor with Raspberry Pi and PWM] After my dad and I got an LED to dim using Pulse Width Modulation on my Raspberry Pi, we decided to try to spin a servo motor. We had a bunch of old servo motors on my robotics team at school so I used one..... Listed under: [Motor Projects]

1045. 

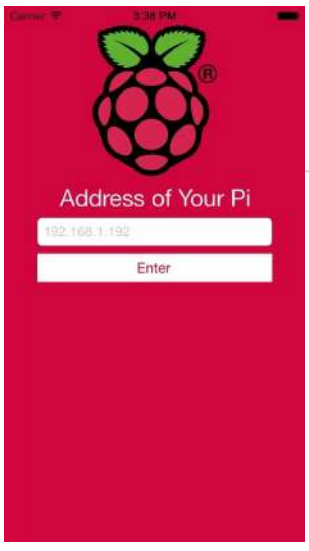
[Social Alarm Clock] Authors: Alexandru Radovici, Ioana Culic, Maria Tudor - Wyliodrin Bogdan Doinea - Cisco Networking Academy This document describes how to build a Social Alarm Clock by a team of five people: a manager, a product designer, two engineers and a programmer. Introduction We are going..... Listed under: [Clock - Timer Projects]

1046. [Cubieboard/Raspberry Pi case from old external drive] This is the case I made for my Cubieboard/Raspberry Pi which, back in the day, was an external cd writer drive. This case includes: Power supply Silent HDD mount Fan with speed control The first step (for which I, unfortunately, don't have any pictures) is..... Lis under: [Other Projects]

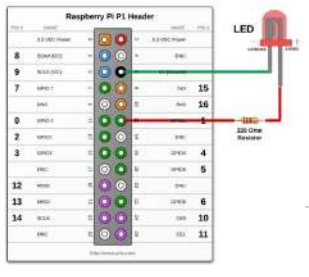
1047. Running an Nginx, PHP, and MySQL Webserver on the Raspberry Pi For my project, I am going to be hosting a website on the Raspberry Pi. I want to be able to set the alarm on the alarm clock through the website and have the C++ program interact with the MySQL database to get alarm times..... Listed under: Clock - Timer Projects

1048.

Raspberry Pi Scoreboard This is a simple project that tries to use the Raspberry Pi as a Scoreboard.. on a character LCD What we will do in this project is write a python script that will use httplib and rplcd to connect to the internet and display the..... Listed under: LCD Projects

1049. 

Controlling Raspberry Pi with Pi Buddy This is a short tutorial to exhibit the abilities of the Pi Buddy app Step 1: Setting up the Pi In order for the Pi to receive command from the device you must have the necessary files and dependancies installed. Pi Buddy runs off of..... Listed under: Raspberry Programmer Projects

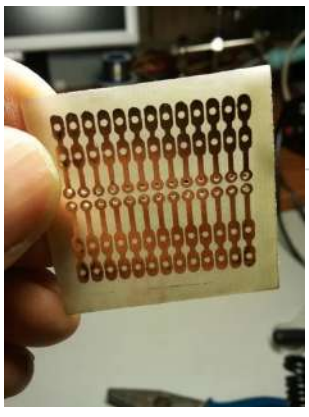
1050. 

Simple GPIO Control using Pi4J The following example demonstrates the simple control of a GPIO pin on the Raspberry Pi. Source Code The source code for this example is included in the github repository: https://github.com/Pi4J/pi4j/tree/master/pi4j-example/src/main/java/ControlGpioExample.java /* * #%L * ********** * ORGANIZATION : Pi4J * PROJECT : Pi4J :: Java..... Listed under: LED Projects

1051.

Connect Remotely to the Raspberry Pi Picture this: We are excited about hosting a Raspberry Pi build night at our maker space in San Francisco. We have keyboards ready, mouses, power adapters, SD cards loaded with operating systems, refreshments, and a room full of creative technical folk. But....uh-oh....we are 1 monitor..... Listed under: Raspberry Programmer Projects

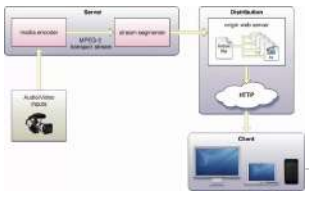
1052. PSoC 4 Pioneer Kit Community Project#051 – Music Player Today we are expanding on the SD card example that we posted last week. In that earlier example we showed you the new customer SD component used to interface with the SD card. In this example we want to expand on that example to play..... Listed under: Sound - Audio Projects

1053. 

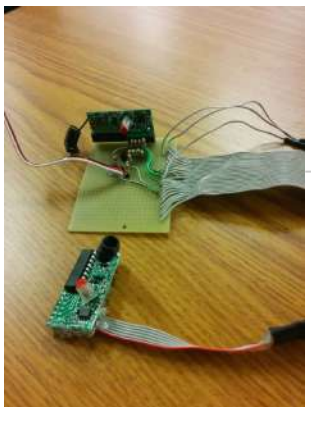
DIY Raspberry Pi Connection Board Featured The PCB I did the project in eagle cad placing one Raspberry Pi 2x13 femal connector (step 2.54mm - 0,01") and then placing 4 pin header strip 1x13 with enlarged pads. I need these pads only for soldering the wires to the pcb. After this..... Listed under: Development Board - Kits Projects

1054.

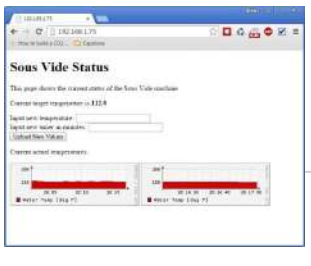
Adding a Joystick to the Raspberry Pi Joysticks are really fun to use. They are also much more intuitive than other input devices. Adding a joystick to your Raspberry Pi opens a lot of new doors. You can now use the Raspberry Pi and the joystick to control a robot, a camera,..... Listed under: Development Board - Kits Projects

1055. 

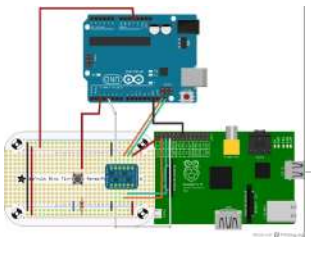
Internet Radio with Raspberry Pi Since long past times, when Gugliemo Marconi has amazed the entire World broadcasting his radio signals from the Elettra ship, a subject held dear by electronic engineers has been radio transmission. After these years, the scenario has changed a lot, firstly with the appering of..... Listed under: Radio Projects

1056. 

Raspberry Pi Picture Frame he picture frame has come a long way since the last post. I now have the wooden frame for it built and almost done but we will come back to that in a minute. Since the last update I have completely remade some of the…... Listed under: Video - Camera - Imaging Projects

1057. 

Raspberry Pi Sous Vide WIP This project is to build a Raspberry Pi sous vide machine that can be controlled via the web or via a walk up GUI interface. The main goal is to get something fully functional for cheaper than most commercially available solutions, which start at about…... Listed under: Internet - Ethernet - LAN Projects

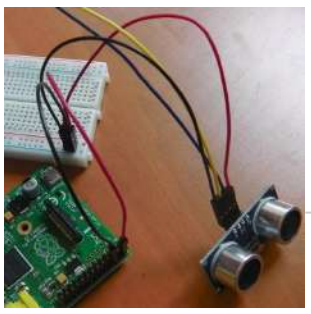
1058. 

I2C + Raspberry Pi + Arduino Uno + RPi Camera Board UPDATE: I've revised the circuit design. I no longer recommend connecting the Arduino Uno to the Raspberry Pi's I2C pins together without the use of a logic level shifter. The revised design uses one from www.adafruit.com. As part of a larger project I'm doing right…... Listed under: Video - Camera - Imaging Projects

1059.

Raspberry Pi Arcade Game High Score DIsplay for Multiple Locations This Instructable will show you how to use a Raspberry Pi board with an existing computer monitor to create an arcade game high score display for your home or office. You and your family or your co-workers can keep an eye on the latest high…... Listed under: Game - Entertainment Projects

1060. Using both ownCloud and Adafruit's WebIDE on the Raspberry Pi Long story short, I installed both of the aforementioned programs on my Raspberry Pi but, in doing so, I was able to navigate to only ownCloud. After doing some digging around the internets, I found the solution. As smithg400 on Raspberry Pi's forums pointed-out, both WebIDE…... Listed under: Internet - Ethernet - LAN Projects

1061. 

HC-SR04 Ultrasonic Range Sensor on the Raspberry Pi In previous tutorials we've outlined temperature sensing, PIR motion controllers and buttons and switches, all of which can plug directly into the Raspberry Pi's GPIO ports. The HC-SR04 ultrasonic range finder is very simple to use, however the signal it outputs needs to be converted…... Listed under: Sensor - Transducer - Detector Projects

1062.

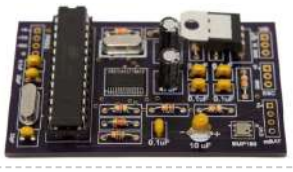
Build Your First IOT with a Raspberry Pi, DHT11 sensor, and Thingspeak. IOT or Internet of Things is a hot topic! According to the experts everything will be connected to the internet and all our devices and their data will soon be just an IP address away from us. So where do you start if you want…... Listed under: Sensor - Transducer - Detector Projects

1063.

Internet controlled SCALEXTRIC Race the Raspberry Pi! We wanted to see if we could control the speed of a car via the internet. When we looked for tips on where to start we found that quite a few people had had a crack at it, but the documentation was all…... Listed under: Internet - Ethernet - LAN Projects

1064.

Raspberry Pi Bluetooth+Airplay Audio Receiver combo Let's make a bluetooth audio receiver allowing you hook up your R-Pi to your stereo and use your phone as the sound source. To be honest, this is not a unique project. Plenty of people have attempted to get a bluetooth receiver working, some (less)…... Listed under: Wireless projects

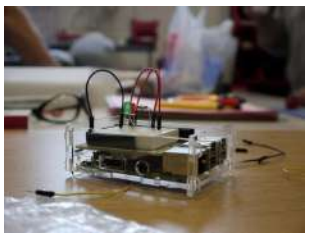
1065. 

Cloud-based Electronic-Design Tools Gain Traction Suppose you want to create an electronic circuit and a corresponding printed-circuit board for it. What software will you use? Unless you already have a favorite, it might be hard to decide: There's a dizzying array of options, ranging from free software typically targeted at…... Listed under: Other Projects

1066.

Raspberry Pi I2c Interfacing and Programming I2C is a multi-device bus used to connect low-speed peripherals to computers and embedded systems. The Raspberry Pi supports this interface on its GPIO header and it is a great way to connect sensors and devices. Once configured you can connect more than one device without…... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1067. Raspberry Pi Prototyping Kit This is a basic prototyping kit for the Raspberry Pi. It will allow you to quickly and easily prototype your hardware ideas without the needing to buy new kit each time. It is also compact, portable, and a lot more durable than most prototyping kits……. Listed under: Development Board - Kits Projects



1068.

[Single 3.7V Li-ion cell power back-up for Raspberry Pi](#) I have a small application continuously running on Raspberry Pi board. Sometimes, in my country, we have (short time) mains power failures. In such situation, my Raspberry board, powered by the wall adapter, turns off immediatly, without any attention for open files, transmissions in act,..... Listed under: [Other Projects](#)

1069. [PiGI – Raspberry Pi Geiger-Müller Interface](#) Geiger counters are basically just devices which enable us to measure ionizing radiation. In the context of human activity we have to deal with natural radiation sources and artificial ones. Some of the materials emitting ionizing radiation are used to create electricity, others were used..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1070.

[An Illustrated Introduction to the Raspberry Pi](#) The Raspberry Pi was originally designed to be a tool for hands-on learning about how computers work. It is also a tool that can be used to make all sorts of creative programming projects. The point of the Pi is to be accessible, and I..... Listed under: [Raspberry Programmer Projects](#)

1071.

[Raspberry Pi / Lego Ball Machine](#) In previous posts I detailed how to: Build a Lego marble pump Use C# and Pulse Width Modulation to control motors with the Raspberry Pi Use C# and OpenCV with the Raspberry Pi Camera Module Each one of those projects are pretty interesting in their..... Listed under: [Game - Entertainment Projects](#)

1072.

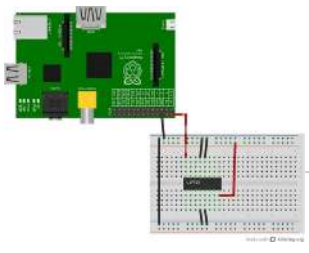
[LapPi – A Raspberry Pi Netbook](#) The Raspberry Pi is a remarkable machine. Lightweight, powerful, and until now it was completely tethered to a wall socket. The LapPi is built to free the Pi! It's made from a mixture of spare parts, unallocated electronics, and scrapped components & cables I have..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1073.

[Monitor your home temperature using your Raspberry Pi](#) At the end of the project you will have a WWW dashboard that looks similar to this: Multiple Sensors Display a temperature history graph per sensor What you need: Raspberry Pi Model A or B The following parts are available through the PrivateEyePi Store:..... Listed under: [Sensor - Transducer - Detector Projects](#)

1074.

[Build a Raspberry Pi-Based Cable Shutter Release for Sony Cameras](#) Replacing a simple and inexpensive remote cable release for your camera with Raspberry Pi may seem like a classic case of over-engineering, but using the tiny machine to control the camera opens up a whole new world of photographic opportunities. Using a simple Python script, you..... Listed under: [Video - Camera - Imaging Projects](#)

1075. 

[Controlling DC Motors Using Python With a Raspberry Pi](#) Objective What we plan to do is safely connect one or two motors to the Raspberry Pi with as few components as possible. Once we have the electronics put together on the breadboard, I will show you how to control them easily using Python to..... Listed under: [Motor Projects](#)

1076.

[The “Raspberry Pi” Pie](#) For the "PI/E Day Contest" on instructables, I wanted to make a pie which I have not made before. I kept thinking what to do and as I saw a few Raspberry Pi Science projects on Instructable, I got an idea of making a Raspberry..... Listed under: [Other Projects](#)

1077. [MBeat USB-M7HUB 7 port hub](#) The Raspberry Pi is often not able to supply enough power to USB peripherals through it’s own power supply and a USB hub is recommended to ensure power drops don’t cause problems in the processor. This means you will need two plug packs. One to..... Listed under: [Interfacin B - RS232 - I2c -ISP) Projects](#)

1078.

Raspicase: Caja para Raspberry Pi (English version here) Bueno, despues de investigar para que podía usar mi Raspberry Pi comprada en raspipc.es , me di cuenta que gracias al sistema operativo Xbian podía conseguir un media center con acceso a los ficheros de mi NAS, a los de un disco..... Listed under: Other Projects

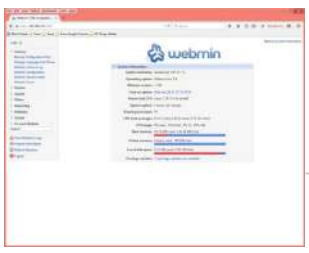
1079.

Use Itead SDK to Drive a 1602 LED Itead Studio made an SDK for linux system of Allwinner A10/20 chip before, which provided users with the underlying hardware driver interface for quick development of upper software, thus those who are not familiar with hardware can easily make a variety of creative applications combined..... Listed under: LED Projects

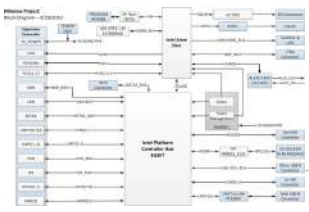
1080.

Department of Redundancy Department: Raspberry Pi Raspberry Pie Pi, is, of course, a useful tool in math - but a Raspberry Pi is a useful tool in all kinds of ways. We are delighted to own a Raspberry Pi - which is sort of like the Naked Mole Rat of computers: it's a credit-card..... Listed under: Other Projects

1081. Using 20×4 RGB LCD over i2c with a Raspberry Pi Recently, I've been dabbling with electronics to fill the void of spare time I've found myself with while I'm between jobs. I'm currently working on a half-baked idea to create some sort of digital assistant who will take instructions in some form, and then read..... Listed under: LCD Projects

1082. 

Adding Webmin to manage a Raspberry Pi My preferred method to work with a Raspberry Pi is via SSH. When one installs Raspian from the Raspberry Pi website, SSH is active and available on port 22 (default SSH port number). All one needs is an ethernet connection, a DHCP server and a..... Listed under: Internet - Ethernet - LAN Projects

1083. 

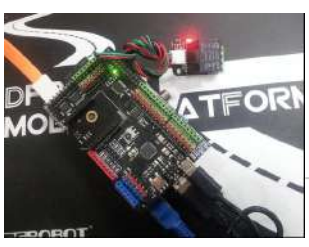
The Minnow Board – A New Small Form Factor We attended an "Internet of Things" meeting here this week, and Scott Garman introduced us to a new small form factor, the MinnowBoard. The MinnowBoard is very high performance single board computer (SBC) using a 1Ghz Intel Atom processor, but unlike most SBC's it has..... Listed under: Development Board - Kits Projects

1084.

Arduino watches for a kitchen catastrophe I guess I should start by admitting that this article was inspired by my own stupidity. When I was a kid, I left a frying pan on a lit stove. I was probably confused by the tactile controls on the vitroceramic hob. Unfortunately, I unwittingly..... Listed under: Home Automation Projects

1085.

Aeroponics with Raspberry Pi and humidity sensor This instructable will teach you how to install an Aeroponics system that is controlled by Raspberry Pi. Aeroponics is plant-cultivation technique that has the roots hanging and is suspended in the air. Nutrient solution is sent to them in form of a fine mist. Aeroponics..... Listed under: Sensor - Transducer - Detector Projects

1086. 

Raspberry Pi Meet Arduino Shield SKU:DFR0311 Introduction What happens when a Pi meets an Arduino? A simple example would be, when building a mobile robot, we use the Raspberry Pi to extend its vision and get a nice tiny monitor. Meanwhile, Arduino handle nicely with the motor driving part and delivers..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1087. Remaking MSR206 RS232 magnetic card reader to USB As you might have noticed, sometimes I work as freelancer in electronics =) It applies not only to f PC electronics and mobile phones, but also to repairing, modifying and designing my own solutions in consumer electronics. One of the projects I worked yesterday..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1088.

[Simple Raspberry Pi Shutdown Button](#) Since the Raspberry Pi foundation decided to leave out an off button to safely shutdown the Raspberry pi, I'll show you a simple method I came up with to build one, so there are no more excuses for yanking the power cable out of your..... Listed under: [Development Board - Kits Projects](#)

1089.

[Intermission Sound Control with Raspberry Pi](#) A few times a year I volunteer to an arts organization and serve as their “house sound and light guy.” I usually run sound and do the lights for the traveling acts if they don’t have a tech with them. The auditorium is in a..... Listed under: [Sound - Audio Projects](#)

1090.

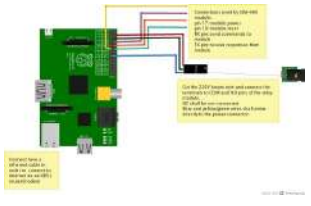
[Analog Sensors Reading with Raspberry Pi and Zabbix Supervisor](#) Analog Sensors Reading with Raspberry Pi as Interface The Raspberry Pi has no built in analogue inputs which means it is a bit of a pain to use many of the available sensors. We need a A/D interface easy to configure in the RPi and..... Listed under: [Sensor - Transducer - Detector Projects](#)

1091.

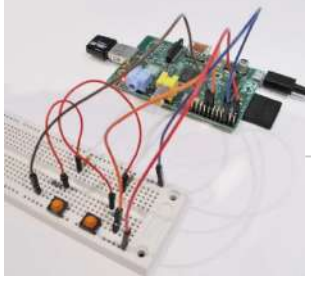
[Raspberry Pi Android App communication](#) Hello everyone Because app's are being used almost everywhere, I decided to make my own tutorial on how to make an app and connect to a MySQL database hosted on a raspberry pi. For exchanging the data between the server and the client, I'm going..... Listed under: [Raspberry Android](#)

1092.

[Talking to the Formula AllCode robot using the Raspberry Pi](#) The Formula AllCode robotics course is great for makers to test their skills and capabilities or for introducing learners to programming and robotics in a fun and motivating way. The robot is compatible with hardware from Raspberry Pi to Android to iPhone, Windows PC’s, MAC..... Listed under: [Car Projects](#)

1093. 

[RasPI-Surv: a Raspberry-based scalable SMS remote controlled video surveillance system](#) RasPI-Surv, based on: A system controller based on Raspberry PI A practical (and modifications-friendly) command/telemetry interface via SMS messages, using the very well known SIM-900 module from ITEAD. A set of wireless video cameras with good motion detection feature A internet router/modem with wireless access..... Listed under: [Wireless projects](#)

1094. 

[Arm/Disarm Using a Switch](#) Project Description In this project I will show you how to arm/disarm an alarm zone using a tactile switch connected to your Raspberry Pi. Software Edit the globals.py file by typing the following command at the command prompt: Configure the arm/disarm variables as per figure..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1095.

[Boot the Raspberry Pi from USB](#) Hello world, time for me to gift some raspberry pi to the people. So here's my story, I recently graduated high school and I've been working with the school's IT guy for my senior year. When I graduated, he decided to get me the latest..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

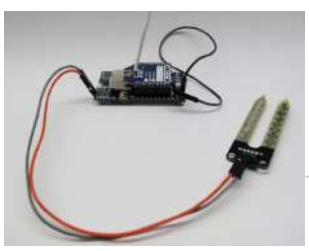
1096.

[Raspberry Pi – Network Spy Energy Saver](#) The subwoofer we had in our home cinema setup died a few weeks ago, so I did my research and found a nice replacement. The only thing I didn't spot was the fact it never goes into standby if there's no signal (unlike the old..... Listed under: [Internet - Ethernet - LAN Projects](#)

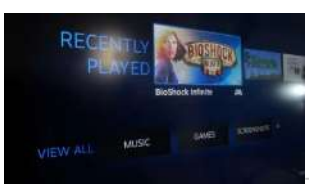
1097.

[Raspberry Pi Audio Player](#) A minimalistic music player based on Raspberry Pi model B with HifiBerry DAC and ATXRaspi power controller I made this with the help (also economical) of my father. Inspired by: http://www.hifiberry.com/forums/topic/small-media-... and http://www.crazy-audio.com/2014/03/a-standalone-st... Here's my first instructable! Step 1: What I used 1. A Raspberry..... Listed under: [Sound - Audio Projects](#)

1098. [A 50 year-old Teletype Powered by a Raspberry Pi](#) I’ve been a nerd for a very long time; As a teenager in the 1970’s I drove up to the Western Union office in my hometown of Buffalo, New York and asked if they had any old teletypes they’d like to get rid of; The..... Listed under: [Development Board - Kits Projects](#)

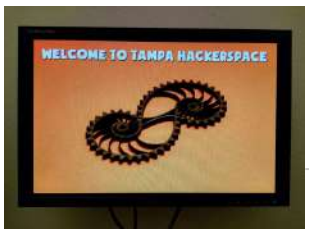
1099. 

[Flood/Water Presence Sensor](#) How it works This sensor has strips of metal plated probes that when in the presence of liquids change the resistance that will activate the internal switch. It can be mounted for example on a skirting board, with the the wireless sensor or Raspberry..... Listed under: [Sensor - Transducer - Detector Projects](#)

1100. 

[Stream games to your Raspberry Pi 2](#) Moonlight is an open source implementation of NVIDIA's GameStream protocol. Moonlight allows you to stream your full collection of Steam games (and other applications) from your GeForce Experience compatible PC to any supported device and play them. These instructions will help you build your own..... Listed under: [Game - Entertainment Projects](#)

1101. [Using the Raspberry Pi's GPIO Pins to Drive an LED](#) Scope: To use the Raspberry Pi's GPIO Pins to turn an LED on and off, and to introduce the basic GPIO functionality of the pi. BOM: – 1 raspberry pi (I'm using rev B) with Raspbian OS installed – 1 LED – 1 1kohm current..... Listed under: [LED Projects](#)

1102. 

[Raspberry Pi Wall Display Without X-Windows](#) This Instructable will walk through using a Raspberry Pi and a monitor or television to create a digital sign or display. A digital display like this can be used at home, at a company, or at any organization to display upcoming events, notices, calendars, photos,..... Listed under: [LCD Projects](#)

1103.

[Raspberry Pi Time Clock](#) This build combines a Raspberry Pi with a rotary-encoder, an RGB LED and an OLED character display to create a time clock that logs my time on tasks directly to a Google Docs spreadsheet. Motivation Whenever I have to record time against projects, I find..... Listed under: [Clock - Timer Projects](#)

1104.

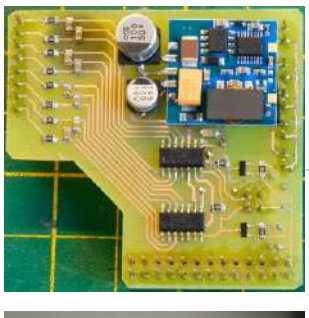
[Build a network-attached storage (NAS) with your Raspberry Pi and an external USB hard drive.](#) As with all DIY projects, one of the main hassles is the enclosure to put all of the hardware in. I wanted a quick solution - didn't have the time to make something fancy. After a while I remembered that I've saved my Amazon Kindle..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1105.

[Kids Build – Raspberry Pi Arcade Cabinet](#) We wanted to create an arcade cabinet as a fun project for the kids at our (Coventry) Makerspace, as a group project that could encompass many different skills and techniques, give them a 'big build' to be proud of as a talking point in our..... Listed under: [Game - Entertainment Projects](#)

1106.

[Raspberry Pi and Arduino: Building Reliable Systems with WatchDog Timers](#) Summary: In this Instructable we look at how to build more reliable computer systems using WatchDog timers. We show how to set up and use the Raspberry Pi and Arduino internal watchdog timers. We also explain why an external WatchDog Timer is a better choice..... Listed under: [Clock - Timer Projects](#)

1107. 

[Raspberry Pi I2C Analog-to-Digital Converter](#) The original plan for the Analog-to-Digital Converter was to use the Dallas 1-Wire system and use the DS2450 1-Wire Quad A/D Converter which was advertised as being a 16 bit device but after buying two of the chips which are around £5 each I found..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1108.

[Raspberry Pi Home Arcade](#) Play all your favorite 8-bit video games with MAME and an Arduino Esplora controller. The Raspberry Pi is great for all sorts of small computing applications — 3D printing servers, in-car computing, and more. But the Pi can also be the beating heart of a..... Listed under: [Home Automation Projects](#)

1109.

Home media center using raspberry pi Using Raspberry pi and a hdmi/vga display from a old desktop monitor, you can create you own home media center. This is a very simple project and requires minimum prerequisite knowledge of programming/embedded systems design. All components used are off the shelf ! Here are..... Listed under: Home Automation Projects

1110.

Raspberry Pi – TESLA BT-100 printer program using GPIO Raspberry Pi BT-100 printer program v0.1 (May 2013) Usage: bt100-tlc [options] SIGNAL GPIO -h print help -D turn debug on OUT_LEFT: 17 -B bidirectional print OUT_RIGHT: 27 -t file input text file ..... Listed under: Other Projects

1111.

Serial hookup JeeNode to Raspberry Pi One way to connect an RFM12B to a Raspberry Pi is to simply plug in a JeeLink, using the built-in USB capabilities of the RPi. But that's a bit of a detour – why go through USB? Since the JeeNode's FTDI connector can use 5V..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1112.

Raspberry Pi Christmas Tree Light Show This project involves using a Raspberry Pi to drive 8 AC outlets which are connected to Christmas Tree light sets. The AC lights are simple one color strands of lights, but to give a more dynamic range to the light show there is also a..... Listed under: LED Projects

1113.

Control raspberry from twitter OBJECTIVE: Use the Raspberry PI to monitor a Twitter feed and control a mechanical device.If you are not interested in the details of the build and just want to see the result you can watch the vid below. RESULT: Success!!! You can control the "The..... Listed under: Internet - Ethernet - LAN Projects

1114.

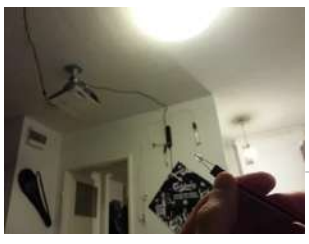
STLs and Raspberry Pis It's a weird one. When it first came out, people were struggling to figure out what to do with it. A surprising feature for something that sold out very quickly – the Raspberry Pi. Well, we've now come up with another use for them –..... Listed under: Radio Projects

1115.

How to turn an USB camera with Raspberry Pi into an Onvif IP Camera? Introduction At this instructable, we will make a new interesting Camera solution, which have never seen before! I would like to show you how can you make connection your USB camera and Raspberry Pi with Camera SDK. The goal is to turn your webcamera to..... Listed under: Video - Camera - Imaging Projects

1116.

Raspberry Pi 2 Weather Station Our hackerspace (Bloominglabs) recently received an ADS-WS1 weather station from a generous benefactor. Additionally, we were selected by Instructables for the Raspberry Pi 2 hackathon so we got some RPi2's to hack on. For my project, I decided to use an RPi2 to put our..... Listed under: Temperature Measurement Projects

1117. 

Raspberry Pi as IR Remote (LIRC) If you are like me and hate to look for TV/projector/speakers remote, you will be happy to know that you can use your Raspberry Pi and your computer or phone to act as IR remote. What you need? Raspberry Pi 940nm IR diode (preferable super..... Listed under: Wireless projects

1118.

Raspberry Pi Weather Station Build a personal weather station with Raspberry Pi that emails you the temperature, humidity, and rainfall. *In a couple of weeks I will be adding a barometric pressure sensor to calculate chance of rain. Step 1: Supplies You will need: Raspberry Pi b and power..... Listed under: Temperature Measurement Projects

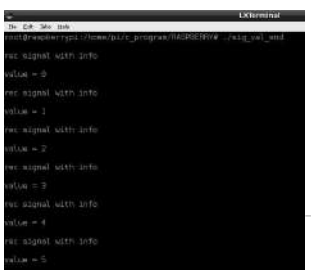
1119.

[Vertical Hydroponic Farm] We call our project RUFS, for Robotic Urban Farm System A vertical hydroponic garden Allowing for high density yields and shorter growth cycles Reducing resource consumption - water, fertilizer and space Labor saving - no weeds or soil to till Higher consistency of crops with..... Listed under: [Other Projects]

1120.

[Raspberry Pi enclosure] (The inlay for this is...really beautiful, and a bit tough to see at the resolution of this instructable. Check here: http://www.flickr.com/photos/hslphotosync/7438625092/sizes/o/in/photostream/ For a full resolution picture) I've been really excited about the raspberry pi for quite a while now, and have been eagerly waiting for the..... Listed under: [Other Projects]

1121. [Controlling a Raspberry Pi's GPIO over the network] The first step in playing with a Raspberry Pi's GPIO interface is to turn an LED on and off on command, the Hello World of digital electronics. As fun as that is, it would be more fun to do from my mobile phone using my..... Listed under: [Wireless projects]

1122. 

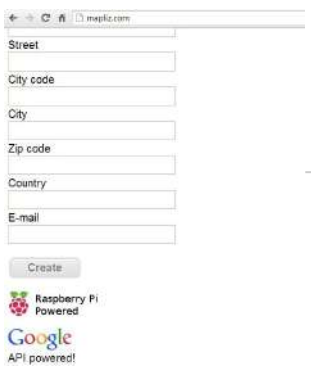
[How to Send Value Between Processes Using Signal] Developed By: Ajish Alfred Linux operating systems especially Ubuntu is preferred for all kind of programming and development. In a multi-tasking environment of the Operating System several processes executes at the same time and the Signals provide an Inter-Process Communication (IPC) method. The Operating System..... Listed under: [How To - DIY - Projects]

1123.

[Raspberry Pi Tor relay] Tor (short for The Onion Router) is a system intended to enable online anonymity. The Tor client software directs internet traffic through a worldwide volunteer network of servers to conceal a user's location or usage from anyone conducting network surveillance or traffic analysis. Using Tor..... Listed under: [Internet - Ethernet - LAN Projects]

1124.

[GardenPi: Garden Care with Raspberry Pi] Like any good "lazy programmer," I'm always looking for ways to automate. This spring's project: monitoring and watering my garden. I had a wifi-enabled Raspberry Pi laying around and decided to put it to good use. For this project I wanted to do better than..... Listed under: [Home Automation Projects]

1125. 

[Raspberry Pi as webserver.] This instructable will only briefly show a way to enable webtraffic to your Raspberry Pi. In the last step you'll find a guide to add the content. You'll need: 1 Raspberry Pi 1 Router 1 Micro USB cable 1 Ethernet cable (and of course an..... Listed under: [Internet - Ethernet - LAN Projects]

1126.

[Getting to know Raspberry Pi] This is a very simple instructable for those of you who got a new Raspberry PI and a Pi Face and is wondering what can they do. This instructable is also documented on Makeystreet.com - Makey : Getting to know Raspberry PI Parts used :..... Listed under: [Raspberry Programmer Projects]

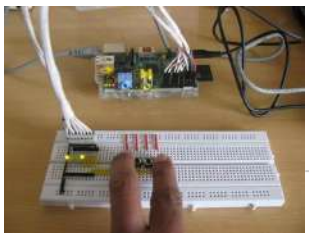
1127.

[Raspberry Pi – Model B+ Setup] The Raspberry Pi Model B+ is a credit card sized computer with a Micro SD Card as a hard drive and 512MB of RAM. You install a Linux based software onto the SD Card and insert it to the bottom of the Pi. There are..... Listed under: [LED Projects]

1128. [My Raspberry Pi Pool Timer — Electronic Assembly] I used to do many projects like this as a teenager, an eternity ago as it seems. One thing I learned the hard way is to always, always, assemble projects gradually, starting with the power. If the power is wrong, in the best case, you..... Listed under: [Clock - Timer Projects]

1129. [Raspberry Pi and Custard for Schools] Raspberry Pi is a low cost credit card sized ARM/GNU based single board computer that runs on a Linux Platform and plugs into your TV, just add a mouse and keyboard and a little imagination. It will be available to buy soon at around £22..... Listed under: [How To - DIY -

Projects

1130. 

How to Read Multiple Inputs Using Raspberry Pi The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers, interrupt..... Listed under: How To - DIY - Projects

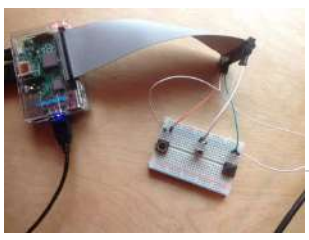
1131.

Setup Weaved and the Raspberry Pi If you've ever tried to setup your Raspberry Pi as an Internet of Things device, you'll know that unless you jump through some massive hoops, you're stuck serving web pages and data on your local network. Getting information from your Pi on your phone, or..... Listed under: Internet - Ethernet - LAN Projects

1132.

Attendance system using Raspberry Pi and NFC Tag reader With my new toy Raspberry pi I've done several testing projects from instructables, adafruit etc. But after a while it became boring and I've started looking for something actually useful for me. My previous playground was my new phone several weeks ago which came with..... Listed under: LED Projects

1133. 16×2 LCD Module Control Using Python LCD Module Hardware The pinout of the module is : Ground VCC (Usually +5V) Contrast adjustment (VO) Register Select (RS). RS=0: Command, RS=1: Data Read/Write (R/W). R/W=0: Write, R/W=1: Read Enable Bit 0 (Not required in 4-bit operation) Bit 1 (Not required in 4-bit operation)..... Listed under: LCD Projects

1134. 

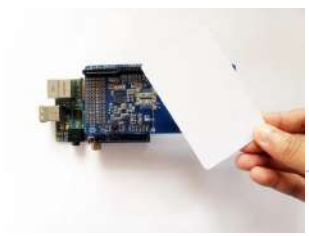
Raspberry Pi GPIO game You will need... -Raspberry pi model b+ with raspbian and Python 2(which should come with raspbian) -HDMI monitor and cable -3 tactile push switches -Breadboard(you can get by without it be connecting straight to the buttons, but this also works as a stand for the..... Listed under: Game - Entertainment Projects

1135.

Raspberry Pi controlled power bar. A latching relay is used in this power bar. With this special relay you can switch on and off a lamp, your PC, your Hard-disk or any other devise with a little python program on your Raspberry Pi Advantage and disadvantage of the Latching Relay..... Listed under: Development Board - Kits Projects

1136.

"Interface Keyboard Or Rs 232 With Or Without Lcd Display". Sabrent sbt-usc1k usb serial (9-pin) db-9 rs-232, General brand sabrent model sbt-usc1k type usb to db9 (rs-232) spec length 1 ft. connector number 2 features features converts a standard 9-pin serial port to usb. Line interactive sine wave ups system 3kva snmp 2u rack, Smartpro..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1137. 

NFC with Raspberry Pi and Arduberry The Arduberry is a simple and inexpensive way to bring Arduino shields to the Raspberry Pi. The device is a shield that slides over the Raspberry Pi and allows you to stack and use Arduino shields. The Arduberry requires no physical configuration to work with..... Listed under: Development Board - Kits Projects

1138.

Raspberry Pi and 1-Wire In this article by Jack Creasey, author of Raspberry Pi Essentials, we will learn about the remote input/output technology and devices that can be used with the Raspberry Pi. We will also specifically learn about 1-wire, and how it can be interfaced with the Raspberry Pi..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

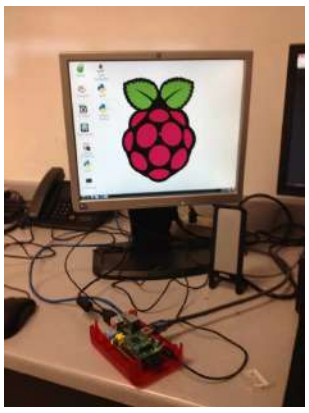
1139.

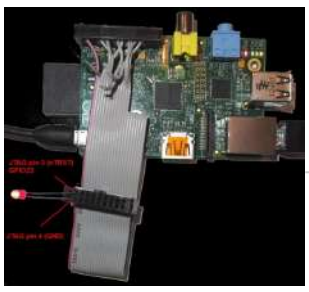
LED Blinky in Lua on Raspberry Pi running Mihini on ArchLinux After setting up Eclipse M2M toolchain for Raspberry Pi, I wanted to try out a simple lua script to blink LEDs using GPIOs. Here is the schematic and lua script for the same. I used the 3.3V available on RPi for powering the LEDs. 1..... Listed under: LED Projects

1140.

Raspberry Pi Timelapse This project will show the reader how to setup and customize a timelapse application using a Raspberry Pi, Model B and a RasPi Camera. The timelaplse can be customized to take pictures as fast as 1 per second or any time slower to once per..... Listed under: Video - Camera - Imaging Projects

1141. Setup Raspberry Pi Here is everything that you need to set up your raspberyPi. The Pi itself. The included power cable. An Ethernet cable. I also used an hdmi to dvi cable since my monitor did not support hdmi but any hdmi to hdmi cable would work too..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects



1142. 

[Preparing Raspberry PI for JTAG Debugging] This tutorial shows how to prepare your Raspberry PI board for debugging with JTAG. Using JTAG will allow debugging the Linux kernel using hardware like Segger J-Link. As Raspberry PI board does not have a connector with a normal JTAG layout, preparing the board for..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1143.

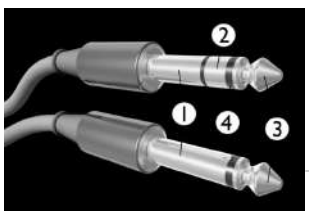
[Compact High-Performance 12V 20W Stereo Amplifier] Amplifiers which run from 12V DC generally don't put out much power and they are usually not hifi as well. But this little stereo amplifier ticks the power and low distortion boxes. With a 14.4V supply, it will deliver 20 watts per channel into 4-ohm..... Listed under: [Sound - Audio Projects]

1144.

[Smart patient monitoring system using Arduino or raspberry pi] INTRODUCTION :- Monitoring vital signs and locations of certain classes of ambulatory patients can be useful in overcrowded emergency departments and at disaster scenes, both on-site and during transportation. To be useful, such monitoring needs to be portable and low cost, and have minimal adverse..... Listed under: [Medical - Health based Projects]

1145.

[Raspberry Pi at Work: Serial Console Server] It is some time passed the last (modern) Millennium. We are now in the age of "Cloud Computing" yet there are still those who staff 24/7 Data Centers..... Where Inevitably "Legacy Systems" Lurk , running some forgotten but critical applications on hardware systems passed their..... Listed under: [Internet - Ethernet - LAN Projects]

1146. 

[Camera control via shutter release cable] Many cameras have a 2.5mm audio jack in the side for a remote shutter release cable, and it can be used to wake up the camera if it has gone into power-save move and also take pictures. For now, I have only tested this against..... Listed under: [Video - Camera - Imaging Projects]

1147. [Raspberry Pi review – the price is right, but the software is not...] Unless you've been living under a rock, you'll have at least heard of the Raspberry Pi. Since the creation of the Raspberry Pi Foundation, a not-for-profit charity created by Eben Upton and David Braben, the credit-card sized computer has rarely spent a day out of..... Listed under: [How To - DIY - Projects]

1148.

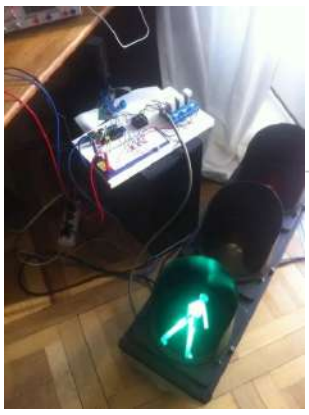
[Raspberry Pi accessories tin] After waiting several months, my Raspberry Pi finally arrived. As it comes quite naked, you need some accessories to use it. First you need a SDCard to store your operating system, then you need some connection to a display, if you use it for penetration..... Listed under: [Development Board - Kits Projects]

1149.

[A Raspberry Pi 2 laptop!] This is a step by step guide on how to make a Raspberry Pi laptop by yourself! Step 1: Intro. Okay, I got my Pi2 yesterday. And straight away I got an idea in my mind, 'Why can't I do this?' And I started building..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1150.

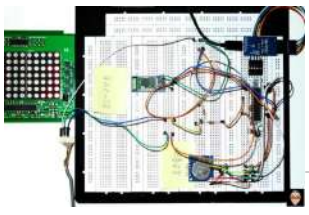
[Getting Started with Raspberry Pi: "Hello World" Programming on Raspberry Pi] The Raspberry pi is a microcontroller board which runs on a SoC chip from the Broadcom with ARM11 processor at the core. The Board is a mini computer itself without any input or output devices but ports provided to connect them. The board is designed..... Listed under: [Raspberry Programmer Projects]

1151. 

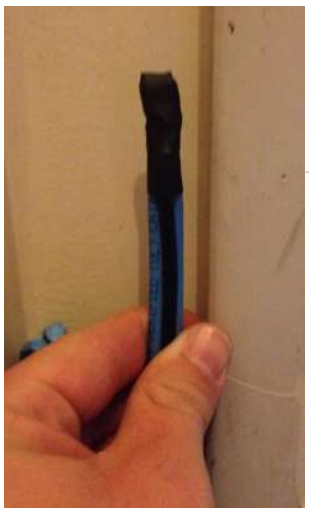
[Integrating a traffic light with OP5 through a Raspberry Pi](#) The last couple of months, I have been amazed about the Raspberry Pi. I won't go into great detail on this wonderful device, other than the obvious. It is cheap It comes with Ethernet, HDMI It runs Debian Linux It has GPIO, general purpose input..... Listed under: Internet - Ethernet - LAN Projects

1152.

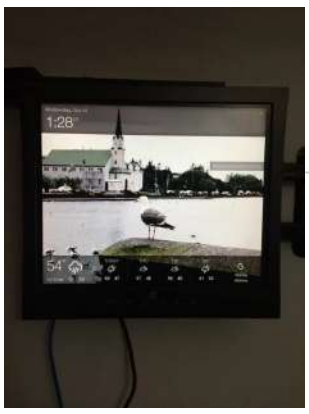
[Raspberry Pi: Airplay Reciever](#) Today I am going to show you how to setup your Raspberry P (Model B or A (With Ethernet adapter) as an Airplay receiver. It is very simple to do and will not take much time at all. Step 1: Materials (Sorry for the bad..... Listed under: Internet - Ethernet - LAN Projects

1153. 

[AM03127 LED marquee + Arduino + Bluetooth = RaspberryPi remote control](#) After some days of soldering, testing and coding I am now able to control my LED marquee remotely via bluetooth from my Raspberry Pi. Using an Arduino Pro Mini (5V model) and the HC-05 module mentioned in my last blog post, I was able to..... Listed under: Bluetooth Projects, LED Projects

1154. 

[Adding More Temp Sensor](#) Since my previous post I have added a couple additional temperature sensors to my piHouse project. One is an outdoor temperature sensor that I previously programmed but never installed outside, and the other is a new sensor in my bedroom. This involved some hardware planning..... Listed under: Sensor - Transducer - Detector Projects

1155. 

[Raspberry Pi Media Panel](#) I wanted a simple yet elegant panel that would display the current weather, my photostream from Flickr, The time and my iCal feeds Step 1: Configuring the Raspberry pi First we'll setup the Raspberry Pi, to do this you'll need to have Raspbian installed. You..... Listed under: Other Projects

1156.

[Raspberry Pi Pandora Streamer](#) I recently finished a project to turn the Raspberry Pi into a music streamer. I had seen a couple of other projects here and here that were the same basic concept, so I knew it was possible (this is nothing new...just new for me), and..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1157.

[Clap Switch Suite/Electronic Production/DIY Kits](#) Description Package name: clap switch kit Kit Model: PSK-1 Operating voltage: 5V PCB size: 28 * 49mm How it works: Q1 and Q2 composed of two audio amplifier circuit, the audio signal is accepted by the MK1 C1 is coupled to the base of Q1..... Listed under: How To - DIY - Projects

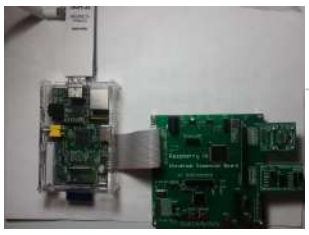
1158.

[Raspberry pi "Power" case](#) I am big fan of Raspberry pi and i am using it as NAS and torrent box among other things. I hate wire clutters and i only use my raspberry pi with putty, so i decided to make a little mod, so you can plug..... Listed under: Development Board - Kits Projects

1159.

[Webcam over 3G with Raspberry PI](#) Description This project was about a personal challenge that my Dad asked me to do it. Everything started more than one year ago when I was trying to do it with Arduino but I lost a lot of time because I couldn't make everything works..... Listed under: Video - Camera - Imaging Projects, Wireless projects

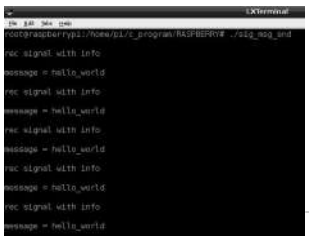
1160. [RaspberryPi Universal Expansion Board](#) Introduction Raspberry Pi is a widely used Arm development board and the Digilent Pmod interface is used to con low frequency, low I/O pin count peripheral modules to host controller boards. This expansion board is a bridge to connect all kinds of Pmods to the..... Listed



under: Interfacing(USB - RS232 - I2c -ISP) Projects

1161.

Sugru Raspberry Pi corners This instructable will show you how to quickly add Sugru Pi corners. Sugru molds like play-doh, then hardens into rubber. It sticks to most surfaces as it dries. We want to identify our placements to avoid closing off ports and add enough clearance so that..... Listed under: Other Projects

1162. 

How to Send Message between Processes using Signal in Raspberry Pi The Raspberrypi is a board actually designed for helping computer education for remote schools but it is a good platform for programmers especially beginners to explore various coding techniques. Linux operating systems especially Ubuntu is preferred for all kind of programming and development. The Raspberrypi..... Listed under: How To - DIY - Projects

1163.

Raspberry pi gone vintage The project is a vintage radio shell with a raspberry pi and external speakers inside of it. This project came from my need to have a tasteful raspberry pi enclosure without it looking like a raspberry pi case. I also had the need for some..... Listed under: Radio Projects

1164.

ANDY: A Multi-Purpose "Humanoid" Robot How the Software Works Here is a quick overview of how the current software works from startup to shutdown. All the code is open source, so you can browse through it here. Below is a basic flowchart. Step One: Startup Andy To start Andy, flip the..... Listed under: Robotics - Automation Projects

1165.

Raspberry Pi Emulation Station Have you got a Raspberry Pi but not sure what to do with it? Well, I'm going to show how to turn it in to a 'console' doing this will allow you to play any game you like from the older platforms. I would recommend..... Listed under: Game - Entainment Projects

1166.

Motivational Bathroom Scale Introducing the latest and greatest in health technology: the Motivational Bathroom Scale. Getting unwanted family comments about your recent weight gain? Now you can get criticized by both your family and your bathroom scale! Simply enter your goal weight with the keypad and step onto..... Listed under: Medical - Health based Projects

1167. Article: Meet OAP — an open robot reference design project Have you ever dreamed of building your own Linux-based droid [that could] roam around your home autonomously, intelligently obeying your commands?" asks Dafydd Walters. "You may now be able to finally fulfill your dream." Walters founded and leads the Open Automaton Project (OAP), which aims..... Listed under: Robotics - Automation Projects

1168.

Willy the Self-Driving Toy Car For our final project, we built a self-driving car that takes in inputs for a final destination and drives itself from its initial location to the final destination. The idea for this final project requires an LCD to display the location that the car is..... Listed under: Game - Entainment Projects

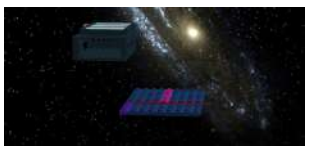
1169.

Raspberry Pi Hard Case The other day I finally received my Raspberry Pi Model B in the mail!!! It only took 6 months.... but at least it arrived. Regardless, I now have it in hand an am happily projecting away. Of course I could spend 30-50$ odd dollars online..... Listed under: LCD Projects

1170. Raspberry Pi Thief Detector What is a Raspberry Pi ? The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore..... Listed under: Sensor - Transducer - Detector Projects

1171.

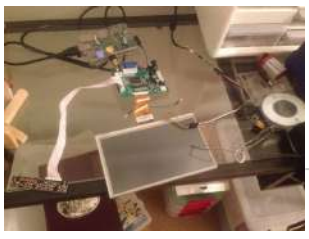
[Monitoring Temperature With Raspberry Pi] The Problem: I recently remodeled my home office and I now have a dedicated closet for my electronics (Server, NAS, AV Receiver, etc.) During the build I planned for heat remediation by installing an exhaust fan that dumps air from the closet into my adjoining..... Listed under: [Temperature Measurement Projects]

1172. 

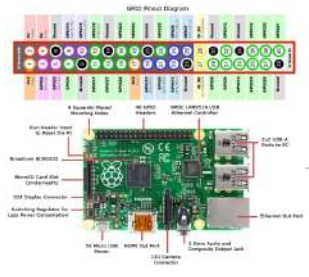
[Raspberry Pi B+ Shark Fin Lego Case] Looking for a Lego Raspberry Pi B+ case ? Then you have come to the right place. I made this Instructable as I could not find a Lego case tutorial for the RPi B+. *This case was designed before I received my RPi (So if..... Listed under: [Other Projects]

1173.

[Raspberry Pi Radio Transmitter] The Raspberry Pi is a very useful computer that can be used for many different things. The people over at Imperial College Robotics Society have a new way to use your favorite treat. They designed a program that turns the Pi into an FM radio..... Listed under: [Radio Projects]

1174. 

[Raspberry Pi Ipad] This is a completely awesome project. It is a home made Ipad That costs less the $100! You need very little programming skills. If you want a cheap Ipad and you love making things this is the project for you! Please vote for me in..... Listed under: [Home Automation Projects]

1175. 

[Circuit Note: Raspberry Pi Pinout Diagram] If you build it, they will program. The genesis of the Raspberry Pi came from a few college students concerned about the dwindling number and skills of students applying to study Computer Science. Newer computers and game consoles have replaced the old machines where most..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1176.

[Using the Raspberry Pi Wobbulator to test the G6LBQ Multiband Bandpass Filter] Finally, I decided to use the Raspberry Pi Wobbulator to test the frequency response characteristics of the G6LBQ multiband bandpass filter which I had built as part of a homebrew transceiver project. The fully assembled filter board is shown below (it is part of a..... Listed under: [Metering - Instrument Projects]

1177.

[Simple Raspberry Pi Portable] This is a very simple instructable that will show you how to put together a little portable Raspberry Pi. Watch the video for visual instructions:Video Step 1: Parts and Tools A Raspberry Pi This could be any raspberry pi, but I chose the Raspberry Pi..... Listed under: [LCD Projects]

1178.

[Raspberry Pi Portable] Today I will show you how to make a portable and compact raspberry pi portable computer. All pictures were taken with my new Oneplus One phone so all of the pictures should be clearer than in my older photos that were taken with an iphone..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1179.

[Test DS18B20 sensor] sudo modprobe w1-gpio sudo modprobe w1-therm cd /sys/bus/w1/devices ls cd 28-xxxx (change this to match what serial number pops up) cat w1_slave The interface is a little unreliable, but fortunately it tells us if there is a valid temperature to read. It's like a file,..... Listed under: [Sensor - Transducer - Detector Projects]

1180. [Hardware button and LED to control association in wireless networks] Almost all wireless technologies use some kind of association process to enable devices to join the network. Such a process is typically initiated by pressing a button on the network controller and by subsequently pressing another button on the device to associate. Software gateways, like..... Listed under: [LED Projects]

1181. Home Security Email Alert System using Raspberry Pi In this tutorial we will look at how to setup up your raspberry pi to take picture of the intruder who enters your home and send an email to you whenever you are not at your home. Step 1: What You'll Need Raspberry Pi running..... Listed under: Security - Safety Projects

1182. $199, 4.2" computer is Intel's first Raspberry Pi competitor The Minnowboard: More expensive, more powerful, more open. With the Raspberry Pi, Arduino Due, and BeagleBone, the world is full of cheap, tiny computers that can be used by creative developers in everything from robots to space flight. One thing these platforms have in common is an..... Listed under: Development Board - Kits Projects

1183. Pi on / off PSU relay switch As everyone is aware the Pi has no on / off power supply switch the only way to turn it off is to physically remove the micro USB cable or to turn off the main adapter / pull plug from the wall. Turning off from..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1184. PiPlay a raspberry pi aiplay server Hello, In this instruct able, I will be showing you how to make a raspberry pi airplay server.To start off, you will need to get a raspberry pi. The model A, B or B+ will work.To allow the raspberry pi to run, you will need..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

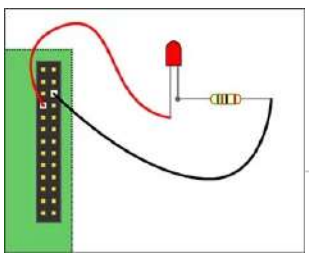
1185. Switch through custom data with 16×2 LCD screen and Raspberry Pi Introduction After starting my circuit testing with some LEDs and switches I moved up to a small 16×2 LCD screen (HD44780 controller) with the Raspberry Pi. The configuration of the LCD pins and base code for output to the 16×2 LCD screen is taken from..... Listed under: LCD Projects

1186. Wooden Raspberry Pi Handheld Hello, this is a step-by-step instruction on how to make a wooden raspberry pi handheld. Step 1: Things you need First you need a raspberry pi, no matter if you are using a model A or B. I used a raspberry pi model B because..... Listed under: LCD Projects

1187. AirPlaying music and video from iPad to Raspberry Pi—it's as easy as... There are so many incredible things you can do with a Raspberry Pi. You could build a robot. Invent a new kind of musical instrument. Or send the tiny computer nearly into outer space on a picture-taking balloon adventure. Sadly, I have no idea how..... Listed under: Sound - Audio Projects

1188. Raspberry Pi Garage Door Opener with streaming video of door status. This Instructable modifies two other guides. Just got a Magnetic Sensor hooked up with door status on page. Step 1: Do these Instructables First You need do this Instructable @http://www.instructables.com/id/Raspberry-Pi-Garage-Door-Opener Then do this one @ http://pimylifeup.com/raspberry-pi-webcam-server/ Next I will show what I changed to make..... Listed under: Sensor - Transducer - Detector Projects

1189. Interfacing Digital Compass (HMC5883L) with Raspberry Pi 2 using Python3 Initially, I was working on a maze solving robot. Instead of using ultrasonic and infrared on Arduino Mega for wall following like my friends did, I try to do something different using the digital compass and Raspberry Pi 2. This experier totally new for..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

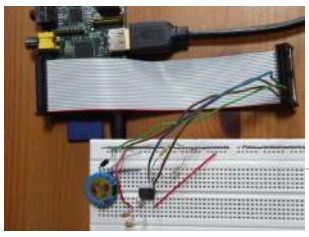
1190. 

[Third Eye Visions](#) Lighting Up An Led Using Your Raspberry Pi and Python Once you've setup your Raspberry Pi according to my getting started tutorial, you are ready for your first real project. Let's light up an led using the Python programming language and the GPIO pins on..... Listed under: [LED Projects](#)

1191. [Smallness über alles: Intel's tiny, Haswell-based NUC desktop reviewed](#) A couple of months back, Intel sent us the latest version of its "Next Unit of Computing," or NUC for short. The NUC is sort of a side-project for Intel. It's a some-assembly-required desktop computer aimed at hobbyists who like playing with new tech and..... Listed under: [Ideas](#)

1192.

[Wooden Raspberry Pi picture frame](#) The Raspberry Pi is an interesting, versatile and powerful low cost computer that can be used for various applications. I have one dedicated as an entertainment center running OpenELEC. It was quite easy to set the system up, integrate it into my network and hook..... Listed under: [Other Projects](#)

1193. 

[Raspberry Pi PCF8563 Real Time Clock (RTC)](#) Having recently received my Raspberry Pi, one of the first things I wanted to do was hook up a real-time clock chip I had lying around (a NXP PCF8563) and learn how to drive I2C from the BCM2835 hardware registers. Turns out it's quite easy..... Listed under: [Clock - Timer Projects](#)

1194.

[ICStation DIY Kit 5V to 12V Step-up Power Converter Module DIY K](#) Description 5V to 12V booster module is based on MC34063 chip booster module, can realize the input 5V voltage, stable output of 12 v voltage. A, Principle that This circuit mainly include filter capacitance, booster chip MC34063 and resistance, lose Into the voltage through the..... Listed under: [How To - DIY - Projects](#)

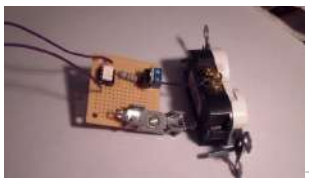
1195.

[Portable Raspberry Pi (V4)](#) The Raspberry Pi. Its a $35 computer the size of a credit card. Being very small, its great for its portability. However, this is usually the problem as it is hard to make it portable. Over the past year and a half, I have worked..... Listed under: [LCD Projects](#)

1196.

[Raspberry Pi driven 128×32 LED sign](#) This is a 128x32 pixel LED display built from 8 "P10" LED Panels and a Raspberry Pi board. The code its running is takes UDP data from another computer and displays the pixels in either one or two bits per pixel. The sign is pictured..... Listed under: [LED Projects](#)

1197. [11 Arduino projects that require major hacking skills—or a bit of insanity](#) Raspberry Pi has received the lion's share of attention devoted to cheap, single-board computers in the past year. But long before the Pi was a gleam in its creators' eyes, there was the Arduino. Unveiled in 2005, Arduino boards don't have the CPU horsepower of..... Listed under: [Development Board - Kits Projects](#)

1198. 

[DIY: Temperature Monitoring and Regulation for HomeBrew](#) Beer brewing is a fun hobby, whether you wanna just brew something easy from a kit, or take the time to fine-tune your preferred style. With every batch, there are always two things that weigh heavy on a brewer's mind: risk of contamination or, depending..... Listed under: [How To - DIY - Projects](#), [Temperature Measurement Projects](#)

1199.

[Turn the Raspberry Pi into a Bluetooth Device](#) Introduction I have a Bluetooth Radio USB device that was gathering dust when I stumbled upon it. So I thought I should put it to use with Raspberry Pi. This instructable is about my learning journey of adding a bluetooth interface to Raspberry Pi. Target..... Listed under: [Bluetooth Projects](#)

1200. [A Raspberry Pi controlled mini CNC Laser engraver [last update Jan 18,2014]](#) About the capability of the engraver Due to the size limit of DVD drives, the machine can only engrave within an area of 36 mm by 36 mm.. So it can do little pieces of wood, plastic board or part of iPhone cases, but not..... Listed under:

[How To - DIY - Projects]

1201.

[DIY Social Integration Kit- Raspberry Pi] A number of sensor applications in recent years collect data which can be directly associated with human interactions. one can use the sensor data in order to model the underlying relationships and interactions. It also leads to a number of challenges, since such data may..... Listed under: [How To - DIY - Projects]

1202.

[The Raspberry Pi – Lapdock Connection] Now that you have your nifty new Raspberry Pi, you'll need a display for it. Teensy analog monitors are pretty cheap, but what you really want is a decent HDMI display. Unfortunately, they're expensive, running from $150 on up into the thousands for the huge..... Listed under: [LCD Projects]

1203. [Rhe PeaterPiPyr – a simplex repeater using the Raspberry Pi] This page describes how to use at $25-$35 Raspberry Pi single board computer, a USB sound card, some Python code, and a two-way radio to create a simplex repeater. A simplex repeater is also known as a store-and-forward voice repeater. Unlike a traditional duplex repeater..... Listed under: [Radio Projects]

1204.

[Creating a $99 parallel computing machine is just as hard as it sounds] Ten months ago, the chipmaker Adapteva unveiled a bold quest—to create a Raspberry Pi-sized computer that can perform the same types of tasks typically reserved for supercomputers. And... they wanted to sell it for only $99. A successful Kickstarter project raised nearly $900,000 for the..... Listed under: [Development Board - Kits Projects]

1205.

[Setting up phpMyAdmin and MySQL on Raspberry Pi] As part of my ongoing efforts to create a really awesome alarm clock with my Raspberry Pi, I had to set up some MySQL databases. I have very little experience with MySQL, and the idea of setting up tables, users, and all that jazz via..... Listed under: [Raspberry Programmer Projects]

1206.

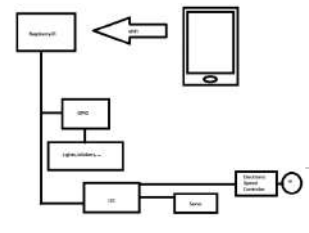
[Raspberry Pi Heat Sink] Project Difficulty: Easy Project Time: Less than 5 minutes Materials Needed: Thermal compound Small heat sink (I got mine form an on-board graphics processor on an old computer) Tools Needed: Hack saw (With metal cutting blade) Vice File (Optional) Screw Driver (Optional) Knife (Optional) Step..... Listed under: [Development Board - Kits Projects]

1207.

[Solar Driveway Light to MSP430 Wireless Sensor Node] The basic idea of this project is to convert a $3-4 solar light found at Lowes and Home Depot hardware store (here in the US) into a wireless remote sensor node. The node will utilize an MSP430G2553 MCU and a nRF24L01+(w/ spirilis library) wireless module..... Listed under: [Sensor - Transducer - Detector Projects], [Wireless projects]

1208.

[1979 Bang & Olufsen Raspberry Pi Internet Radio] This is a 1979 Bang & Olufsen Beocord 1500 cassette recorder that I've converted into a standalone Raspberry Pi internet radio. The analogue VU meters are driven by the Pi via a DAC (Digital to Analogue Converter) circuit, with the current time, station and track..... Listed under: [Radio Projects]

1209. 

[PiRacerX – Android controlled RC car using Raspberry Pi] Short description: We made a car, wich acts as wifi acces point. Users conect to our car and then, they are able to acces our webpage. There you'll be able to download aplication. After the application is installed, the phone makes an UDP session with..... Listed under: [Car Projects], [Raspberry Android]

1210.
[Raspberry Pi and ZenMINER Heatsink and Fan] I wanted to overclock my ZenMINER which is a Raspberry Pi booting from a custom Raspbian image. The device is normally warm to the touch after it has been running for 30 minutes. This unit will be in service 24/7, so it definitely needed extra..... Listed under: [Other Projects]

1211.
[Raspberry Pi Analog to Digital Conversion Experiments and Howto] The Raspberry Pi is a great little educational computer, but all models of the Raspberry Pi miss a critical ingredient for electronics experiments – an Analog to Digital converter. I am constantly working on upgrading my lab, and one of my needs is to measure..... Listed under: [How To - DIY - Projects]

1212.
[Control Stepper Motors With Raspberry Pi: Tutorials and Resources] The title of the article can be as well as 'Let's build robots using stepper motors and the Raspberry Pi,' because everything you need is a good example of where you can learn how to control the spin direction, speed, and the rotation of a..... Listed under: [Motor Projects]

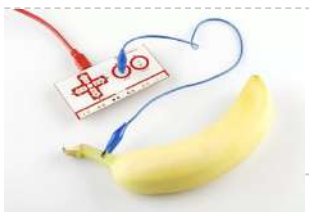
1213.
[HY28B Touch Display with Raspberry Pi] There are quite a few displays out there that can be used with the RPi. Apart from those having an HDMI adapter or being connected via the composite output most bare bones displays have a parallel or serial data interface. Both of these last two..... Listed under: [LCD Projects]

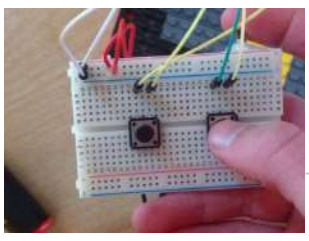
1214.
[An LCD Expansion Shield for your RaspberryPi] Today we introduce a great LCD expansion shield for Raspberry Pi that allows you to create an interface to control applications without the need to constantly keep a monitor, keyboard and mouse connected. Cool! Isn't it? The enhanced value of a micro PC as Raspberry..... Listed under: [LCD Projects]

1215.
[Raspberry Pi Internet Weather Station] This Instructable will show you how to build a really cool Raspberry Pi Internet-based weather station. Actually, to call this build a "weather station" is a bit of an under statement. This build could easily be extended to provide much more than simply the weather..... Listed under: [Internet - Ethernet - LAN Projects]

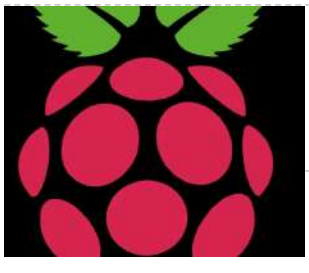
1216.
[Raspberry Pi and Breadboard (Raspberry Leaf)] If you are using your Raspberry Pi with Breadboard, and you have lots of connections to make, then the Pi Cobbler from Adafruit is pretty neat. However, sometimes you only need to make a couple of connections and the Cobbler is overkill and a few..... Listed under: [Development Board - Kits Projects]

1217.
[X100/105/200/300 Function Expansion Board for Raspberry Pi B/B+] The X100 expansion board designed for use on the Raspberry Pi (RPi) computer platform. The board supplies RPi with a regulated +5V from a wide-range voltage source and also contains a real-time clock, a RS232 master port, a HDMI to VGA converter, 3-port USB hub,..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

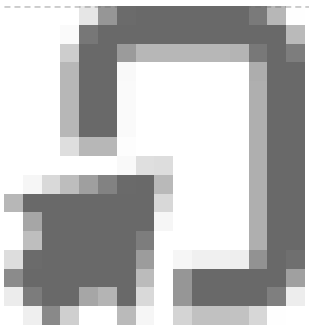
1218. 
[Microcontrollers: The Basics] Overview Different kinds of computers are designed for different purposes. The computer at the heart of your laptop is optimized for different puprposes than the one in your phone or the one in your mouse. The simplest computers are those that are designed to take..... Listed under: [Development Board - Kits Projects]

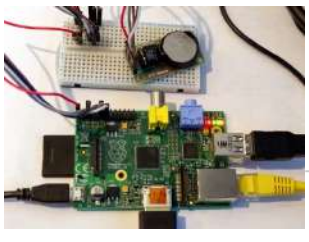
1219. 
[Simple Handheld controller for Raspberry Pi] So I recently programmed a small game with python that was completely controlled by a few GPIO buttons. Over the past few days, Ive been messing around with it, finding ways to make it better, when I decided, with my small breadboard, it would be..... Listed under: [Game - Entertainment Projects]

1220.
[Control a Relay From Anywhere Using the Raspberry Pi] If you found this article after doing a search on Google, welcome! On this website you will find plenty of content around DIY home automation using open-source hardware. Enjoy the article! I have been asked a lot about writing tutorials using the Raspberry Pi for home automation, as well..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects], [LED Projects]

1221. 
[Make Raspberry Pi a Multi-User Desktop] Introduction I want my daughter to use the Raspberry Pi for her school work and learn programming. I could buy her a Raspberry Pi or I could share my Raspberry Pi with her. I chose to share the Raspberry Pi with her. After completing this..... Listed under: [Raspberry Programmer Projects]

1222. [Web control four rotator, fifteen relays and many other features that come from Raspberry PI RemoteQTH server.] Main functions: Control the four rotators using the light buttons, rotary encoder and with a two-line display for each rotor. Same control remoted via web interface or telnet - only click to map and confi rotating. Rotator module can directly control the motor of the..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects], [Wireless projects]

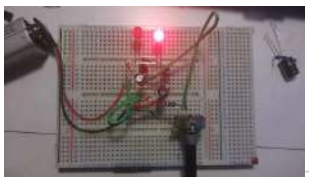


1223. 

[Real Time Clock for RaspberryPi](#) I bought a Real Time Clock module (RTC) about 6 months ago and I've only just taken it out of its anti-static bag. With two potential projects in mind that may require an RTC, I opened the packet, wired it to my RaspberryPi and then....not..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1224.

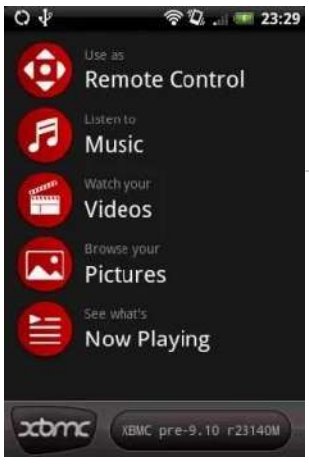
[Raspberry pi Tracer interface](#) Everything started with the fact that the MT-5 display wasn't what I really needed. I was in the need of checking the charging from the device using the battery: my trusty Raspberry pi (1 B at the time). I managed to stumble over this instructable..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1225. 

[Circuit for Photodiode-Pi Interface](#) Here's a diagram I did today for the interface between the photodiode and the Raspberry Pi. First, the photodiode allows small amounts of current to flow when light is shone on the device. this current is amplified by the BJT (so, just a normal transistor..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1226.

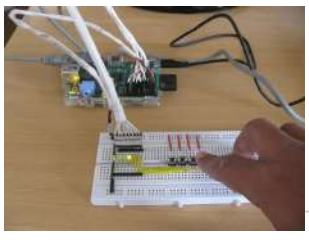
[Mini Arcade Cabinet Project](#) Cabinet is made from 6mm mdf with 12mm mdf base. My own design inspired by full size cabs and other designs ive seen around. Parts - Raspberry pi model B with 8gb sd running retropie 2.3 7" lcd and control board removed from an old..... Listed under: [Game - Entertainment Projects](#)

1227. 

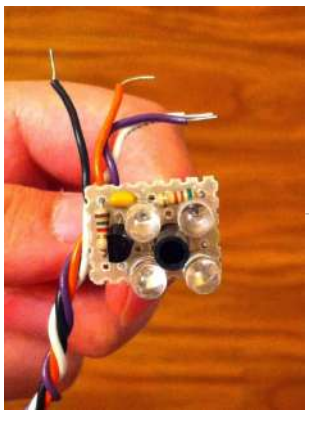
[XBMC Media Center with Raspberry Pi](#) Media Centers are useful tools that allow users to organize and play their media, including videos, music, and pictures. Media Centers make it possible to stream content from multiple computers to a home entertainment system or other central location. In this tutorial, we will show..... Listed under: [Sound - Audio Projects](#)

1228.

[Read analog data, in Java Raspberry PI](#) mportant: This document goes along with the code at https://github.com/OlivierLD/raspberry-pi4j-samples/. In the sources, refer to ADC The goal here is to read analog data from a Java program running on a Raspberry PI. For this example, we will be using a potentiometer like this one..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

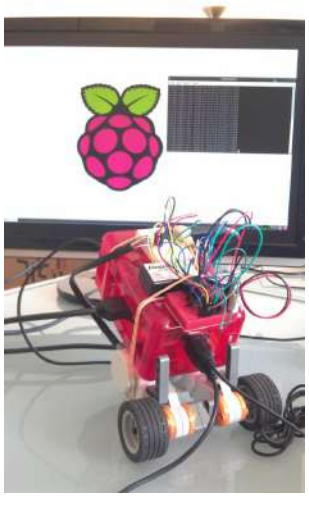
1229. 

[How to Use Signal Values and Messages to Read Multiple Inputs](#) Those who have worked on simple microcontrollers know how difficult it is to continuously check for an input pin status without affecting the other task of the microcontroller like displaying and SSD, playing a music etc. In a Multitasking environment of an Operating system like..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1230. 

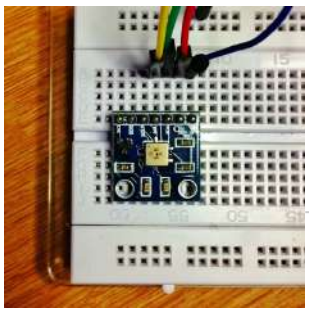
[A simple analog proximity sensor with digital interface (for Raspberry Pi) [last update: Feb 7, 2014]](#) Raspberry Pi has a Broadcom BCM2835 chip, which controls 26 GPIO (general purpose input/output) pins. There are C library or RPi.GPIO python package available online that can be used to control the pins. The RPi.GPIO package is by default included in most Raspberry Pi system, such..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#), [Sensor - Transducer - Detector Projects](#)

1231. [LEGO MINDSTORMS Motors with Raspberry Pi (BrickPi 0.1)](#) Since we first got the Raspberry Pi, we have wanted to make a robot out of it. There aren't many kits out there yet that let you do that (yet). This HowTo Raspberry Pi Project shows you how we hacked together a motor controller from..... Listed under: [Mot Projects](#)



1232.

Raspberry Pi Home CCTV System Hello, In this instructable, I will be showing you how to make a small CCTV system using the raspberry pi. I have wanting to do this for a while and have now got round to doing it! For this build, you will need the following:..... Listed under: Security - Safety Projects

1233. 

Raspberry Pi reading BMP085 Temperature & Pressure Another fun little i2c device acquired cheaply via eBay. It reads barometric pressure and temperature. There's some relatively simple maths to convert the outputs to something readable. Once again, ADAFruit provide a fantastic guide and library for using the device in their Using the BMP085 with Raspberry..... Listed under: Temperature Measurement Projects

1234.

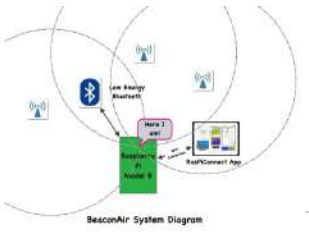
Raspberry Pi Gate Opener This is a raspberry pi project that enables you to open your garage/gate with any kind of web browser! Step 1: Gather those supplies. Raspberry Pi - 35$ Relay Board - 5$ Your Gate Opener - (You will be sacrificing the gate opener) Great. Now..... Listed under: Internet - Ethernet - LAN Projects

1235.

Raspberry Pi I/O Expander Board To simplify using the the MCP23017 I/O Expander on the Raspberry Pi I've made a little plug in board using a Slice of Pi from Ciseco. The Slice of Pi is a handy little PCB that plugs directly onto the Raspberry Pi's GPIO pins and gives a..... Listed under: Development Board - Kits Projects

1236.

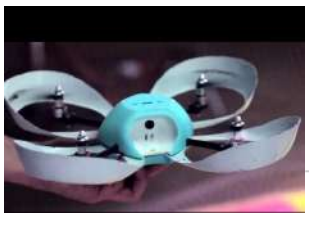
PiPhone – A Raspberry Pi based Cellphone Overview Ever wanted to build you own cellphone? Well now you can with this guide that uses a Raspberry Pi, PiTFT, and a FONA to make a functional cellphone that you can call your friends with! Things You'll Need: Raspberry Pi computer, the Model B or Model B+ is..... Listed under: Phone Projects

1237. 

BeaconAir On Raspberry Pi / iBeacons BeaconAir is a Raspberry Pi based project that reads the advertising packets coming from iBeacons and roughly calculates the physical position of BeaconAir by Trilateration. This is an application that uses my new iBeacon Python library that READS iBeacons on your Raspberry Pi. It does not turn..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Wireless projects

1238.

Raspberry Pi B+ boot from SD Card The new Raspberry Pi model B+ uses Micro SD cards(WOOHOO!!!), wait what if I have SD cards from my old Pi's I want to use? That is what this instructables was created to help you do. Thanks to the Raspberry Pi foundation and the community..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1239. 

Linux-powered quadrocoptor has three cameras A startup called Pleiades is over a third the way to its Kickstarter goal for funding a hackable Linux quadrocopter that starts at $520. Spiri, which runs Ubuntu Linux with Robot Operating System (ROS) extensions on a dual-core Freescale ARM SoC, is an airborne craft..... Listed under: Video - Camera - Imaging Projects

1240.

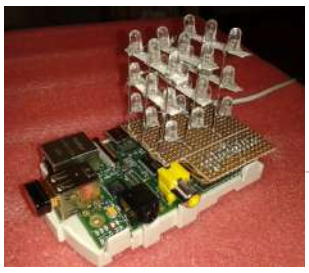
Raspberry PI based Motor Speed Control The main objective of this project is to develop a speed-control system, for a DC motor, that alters voltages applied to the armature by using a Raspberry Pi board.The speed of the DC motor is directly proportional to the voltage applied across its terminals. Hence,..... Listed under: Development Board - Kits Projects

1241.

Raspberry Pi Firewall and Intrusion Detection System Maybe you think "Why should I protect my pivate network? I've got no critical information on my computer, no sensitive data". Are your emails really public? Don't you have some photos you don't want to upload to Facebook, because they're private. Do you really don't..... Listed under: Security - Safety Projects

1242.

3D camera (with Raspberry Pi) Although 3D camera's are usually said to be really intricate, hence their price, it turned out the basic principles aren't really that difficult to replicate. Granted it is troublesome to get the quality of professional products, compared to their cost, this is a neat homebuilt..... Listed under: Video - Camera - Imaging Projects

1243. 

Raspberry Pi: 3x3x3 LED Cube If you do a web search for LED cubes, you will notice that they have been built so many times and anything less than 8x8x8 is a bit of a waste of time. Knowing all of this, and basically because I am bored out of..... Listed under: LED Projects

1244.

PiLarm: Portable Raspberry Pi Room Alarm I'm always on the lookout for those teachable moments. Inspiration struck me when my 5-year-old asked for help in keeping his little brother from sneaking into his room. I spotted the perfect time to teach him about inputs, outputs, and programming. Learning is easier when..... Listed under: Home Automation Projects

1245.

Raspberry Pi supercapacitor micro-UPS seeks funding Nelectra is crowdfunding a supercapacitor based micro-UPS for Raspberry models B and B+, enabling brownout protection and "last gasp" shutdown sequences. Bratislava, Slovakia based Nelectra's first product was a generic "Juice4Halt" supercapacitor based micro-UPS (uninterrupted power supply) module aimed at single board computers used in..... Listed under: Solar energy projects

1246.

Simple Raspberry Pi Input Output. Tricopter This is a simple input output switch/LED for a Raspberry Pi, What this allows is for the user to tell the raspberry Pi to do a selection of tasks without the Raspberry Pi being connected to a TV/Monitor or Keyboard/Mouse. WHY?? Well I wanted to..... Listed under: Development Board - Kits Projects

1247.

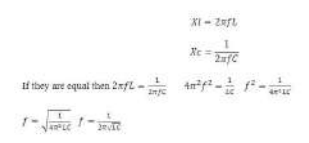
How to build your own Quadcopter Autopilot / Flight Controller Contents Introduction Reading the Radio Inputs Controlling the motors Determining Orientation Acrobatic / Rate mode control Stablilised Control Final Product - video and full code Other ideas: Safety Optional: Raspberry Pi Optional: Autonomous Flight Introduction This article will walk you through building your own controller..... Listed under: Game - Entertainment Projects

1248.

Raspberry Pi Lamp LAMP Server I was using a Raspberry Pi as a LAMP server. I also needed a new lamp for more lighting. My brain then decided I should combine the two, thus creating a Lamp LAMP server. Fun and completely nerdy at the same time. Here is how..... Listed under: LED Projects

1249.

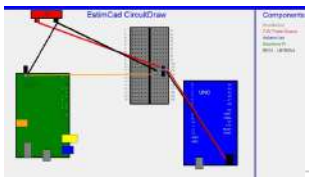
Geolocation Tracker (GPRS + GPS) with SIM908 over Arduino and Raspberry Pi The new shield designed for Arduino and Raspberry Pi integrates the SIM908 module which counts with both GPRS and GPS technologies what allows to easily perform realtime tracking applications. The idea is simple: read the GPS coordinates (longitude and latitude) and send them by using..... Listed under: GPS Based Projects

1250. 

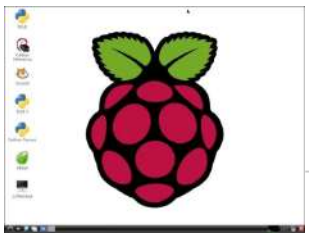
Pi in the Sky transceiver – Raspberry Pi Frequency Synthesiser (Part 1) Method 1 The simplest way to generate a frequency is to apply a voltage to a crystal, the piezo-electric effect will take over and the crystal with resonant at a particular frequency. However, as this was going to be a multiband, multimode transceiver; crystals could..... Listed under: Radio Projects

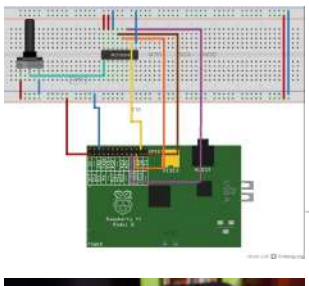
1251.

Cardboard Raspberry Pi Wifi Internet Radio What to do with the small cardboard box full of Raspberry Pi related junk, besides watch it sit slowly collecting dust. Surely it should be doing something interesting? Failing that it could be a wifi radio, I suppose. Notes on how I converted a cardboard..... Listed under: Radio Projects, Wifi / WLan Projects

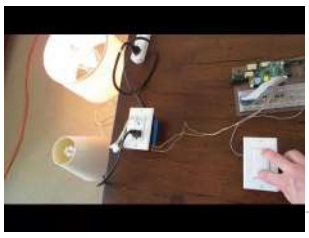
1252. 

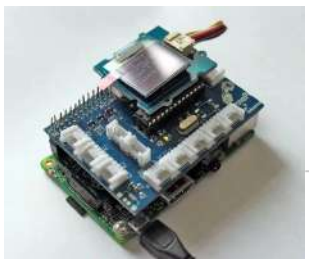
Using CircuitDraw to create electronics diagrams Today I will show you how to use Estimcad CircuitDraw to create diagrams for electronics and robotics projects. This is the second article in a series outlining the installation and use of CircuitDraw.Other Articles: Introduction to CircuitDraw Using CircuitDraw to create electronics diagrams Adding secondary..... Listed under: RFID - NFC Projects

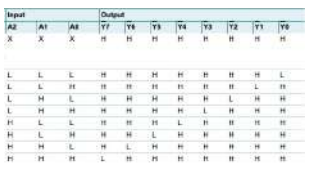
1253. 
Complete tutorial for a raspberry pi beginners . This instructable helps you to setup raspberry pi for the first time without hdmi monitor .By the end of this tutorial you can see the raspberry pi desktop screen from your server laptop. difficulty level:- 1/5 Not required any technical knowledge My current project: (Check..... Listed under: Raspberry Programmer Projects

1254. 
Interfacing an SPI ADC (MCP3008) chip to the Raspberry Pi using C++ (spidev) In this entry I will demonstrate how to interface the MCP3008; an SPI-based analog to digital converter (ADC) integrated chip, to the Raspberry Pi. This enables the Raspberry Pi to interpret analog voltages that are in turn typically emitted by analog-based sensors to reflect a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1255.
Raspberry Pi 2 (Model B+) Setup This is awesome: the newest version of Raspberry Pi (as of 2/25/15) has come out. It's called the Raspberry Pi 2 Model B+. This little board is 6X faster than a Raspberry Pi Model B+ and has 1GB of RAM, which the B+ didn't have..... Listed under: Development Board - Kits Projects

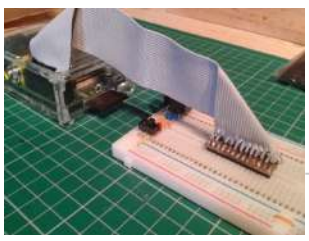
1256. 
raspberry-pi-home-automation A node.js based home automation system based around the Raspberry Pi. For background around this project: Installation To get started, clone the repository and install the required dependencies. git clone https://github.com/anders94/raspberry-pi-home-automation.git cd raspberry-pi-home-automation npm install Hardware The Raspberr Pi needs a little bit of circuitry..... Listed under: Motor Projects

1257. 
Add a $15 Display to the Raspberry Pi The Raspberry Pi is a great little board and packs a lot of punch. But many times you just need a small display to show some information from your project. It can be the local weather, system status, an interactive menu or anything that you..... Listed under: LCD Projects

1258. 
Arduino/Raspberry Pi 2 LED Matrices Does anyone know if I can use a single Arduino or Raspberry Pi to control two 32x32 LED matrices as sold on the Adafruit website? Here is a tutorial where you can wire the 32x32 matrix. Ideally, I'd like to be able to control them..... Listed under: LED Projects

1259.

Raspberry Pi GPIO Protection After damaging the GPIO port on our raspberry pi while designing a new solar monitoring system we decided that it might be a good idea to build a buffer/level translator to protect the GPIO pins from over voltage and ESD spikes. The board would need..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

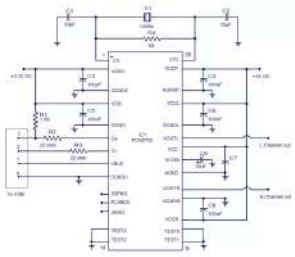
1260. 
Home-Made Raspberry Pi Cobbler Looking at the Raspberry Pi Cobbler in Adafuit's wonderful collection of RPi accessories, I decided that it would be a much better method of connecting the the RPi GPIO to a breadboard than an old IDE cable with wires stuck in the end. I didn't..... Listed under: Home Automation Projects

1261.
MoPi is mobile, hot-swap and 24/7 power for the Raspberry Pi. I want one! (how to order) Something not working? Raise an issue. (In early 2014 we ran a Kickstarter campaign to fund the first production version, which is due for delivery in June 2014. If you missed it, you can get one from Pimoroni.)1 Contents..... Listed under: Solar energy projects

1262.
Setting up a VNC Server on your Raspberry Pi If your Raspberry Pi is purposed to do a task that normally does not require a monitor, mouse and keyboard (or any human interaction for that matter), sometimes it is useful to access your Raspberry Pi's operating system without having to connect a monitor, mouse..... Listed under: Development Board - Kits Projects

1263.
DIY Alarm Monitoring System w/ Raspberry Pi + Foscam + Sensors The Raspberry Pi is an amazing device. Although not the most powerful mini computer out there, it bolsters a tremendous support community, tons of hardware add-ons and coding libraries to your heart's desire. The Raspberry Pi also makes an affordable media player but so much..... Listed under: How To - DIY - Projects

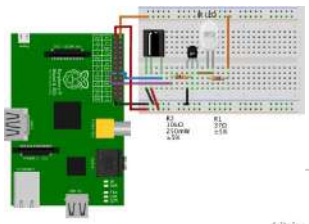
1264. USB sound card Description. Designing and building a USB sound card is no longer a head ache because we have got the PCM 2702 integrated circuit fror Texas Instruments. The PCM2702 is an integrated 16 bit digital to analog converter that has two digital to analog output channels..... Listed under:



[Interfacing(USB - RS232 - I2c -ISP) Projects]

1265.

[Lego Dashboard Mount for Raspberry Pi] When I got my Raspberry I've decided to develop an algorithm of real time lane and vehicle detection. I got it done. Now it's time to put the Raspberry Pi on my car's dashboard. However, I would not like to leave it fixed on the..... Listed under: [Car Projects]

1266. 

[Controlling your TV or any infrared device with a Raspberry Pi] Although the Internet of Things is relatively new, controlling devices remotely is as old as sin; devices have been using IR remotes for ages. There is a lot of untapped potential from the infrared devices sitting in your home. Besides the raspberry pi, you can..... Listed under: [Wireless projects]

1267.

[Customize and build your own smartphone using a Raspberry Pi and 3D printing] For anybody who can remember when the first smartphones came out such as the original Blackberry, the technology was groundbreaking and changed the way we interact with each other and the world-at-large. Over the years, the various iPhone models have updated to make living in..... Listed under: [Other Projects]

1268.

[Turning your Raspberry Pi into an HTPC] In this instructable, I will show you how to turn your Raspberry Pi into an HTPC with a Linux distribution called Raspbmc. From the About section of Raspbmc's website: Raspbmc is a minimal Linux distribution based on Debian that brings XBMC to your Raspberry Pi..... Listed under: [Raspberry Programmer Projects]

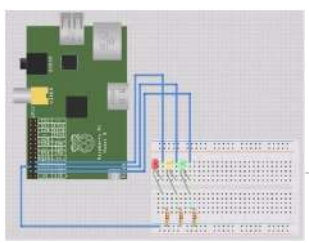
1269. [Building a Battery Board for the Raspberry Pi – Battery Board V0] Two big features of the Raspberry Pi development board are its versatility (due to open hardware/software) and its compact size. I had read a couple of different project articles on the web on how to use a USB Wi-Fi adapter to convert the Pi into..... Listed under: [Phone Projects]

1270.

[How much power can be provided through USB?] We can see that the 5 volt line (+5V0) is powered directly from the USB input power, through a 1.1A, 6V Polyfuse (miniSMD). I believe this means that the 5V input is current limited to 1.1A (maximum hold current, not peak). Let's assume that you're..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1271.

[Raspberry Pi OLED Internet Bandwidth Display] This is a bandwidth monitor using a Raspberry Pi and an OLED display to graphically show the internet bandwidth into and out of our house. A video showing it working is above. Sometimes if the internet is slow or not working very well it can..... Listed under: [LCD Projects]

1272. 

[A Raspberry Pi Build Light for TeamCity in Mono] Some Background... After I bought my Raspberry Pi I went through a little period of uncertainty that most other owners have, asking myself “how do I make this thing useful?” It didn’t take long before one of my colleagues created a GitHub repository for a..... Listed under: [LED Projects]

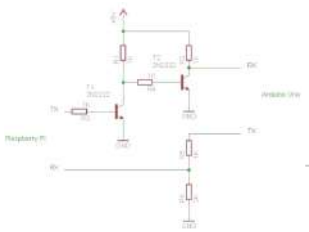
1273.

[Controlling LIRC From the Web] In this post I will cover how to create a web interface + API for LIRC, the Linux Infrared Remote Control project. I will be using NodeJS and a RaspberryPi in this post, but the ideas generalize to other languages and hardware. This post will..... Listed under: [Wireless projects]

1274. [Raspberry Pi B+ Getting Started Guide] This is a tutorial on getting started with raspberry pi b+ model.If you like it please vote and follow Step 1: Downloading Noobs Google raspberry pi noobs download it will be the first result.You can download network or offline I recommend the offline one it..... Listed under: [Development Board - Kits Projects]

1275.

Display and Control Section for AD9835 project Now that the power supply and filter section for the function generator have been designed and realised it is time to concentrate on the control section. We need a way of controlling the signal generator. Lets discuss buttons! We need buttons on the front panel..... Listed under: LCD Projects

1276. 

Communicating over serial between Raspberry Pi and Arduino. Now that my robot has a Raspberry Pi on board I wanted to be able to send commands from the Raspberry Pi to the Arduino telling the robot what to do. In the future I also want the Arduino to be able to send sensor..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Robotics - Automation Projects

1277.

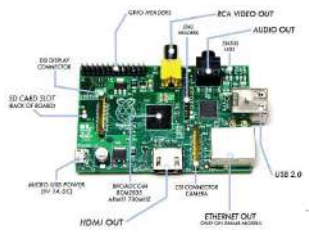
How To Boot Raspberry Pi With NOOBS In case you don't know, the raspberry Pi is a credit card sized computer. It was originally created to help youngsters learn how to program. Since the projects launch this tiny board has come a long way. There are are several models of the Pi..... Listed under: Development Board - Kits Projects

1278.

PDC8544 LCD python bindings for the Raspberry Pi Documentation and Python library module for interfacing a PCD8544 LCD screen to a Rasbperry Pi. Cheap Nokia 5110 modules can be picked up on ebay with a breakout board for a few pounds. Further technical details for the LCD screen can be found in the..... Listed under: LCD Projects

1279.

RKPTmdc Prototype PCB with Header for use with Raspberry PI Version 2 available with a DS3231 RTC circuit Main Features A low cost and simple method of prototyping Raspberry PI projects Includes a 26 way dual row breakout header for interfacing to Raspberry PI Manufactured using a double sided professional double sided PCB Incorporates a..... Listed under: Phone Projects

1280. 

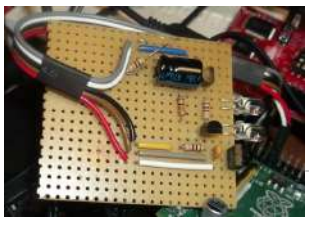
Raspberry Pi (low level I/O electronics control) Topic Discussion Overview Installation from scratch Hardware Pin Out Raspberry Pi, HelloWorld for I/O pins Understanding UART, SPI, I2C port on Raspberry Pi Networking on Raspberry Pi Accessing Raspberry Pi through the network C Programming Python Programming Java Programming List of frequent used Commands Add..... Listed under: Other Projects

1281.

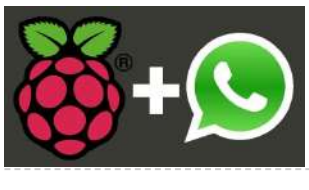
PiCy – The Tiny Raspberry Pi Powered Robot! Build your own tiny Raspberry Pi based robot out of a few easy to obtain bits! You will need: A Raspberry Pi. A PiCy pack kit, which contains: Two motors and two wheels. A battery holder for two AA batteries with battery clip. Two 40mm..... Listed under: Robotics - Automation Projects

1282.

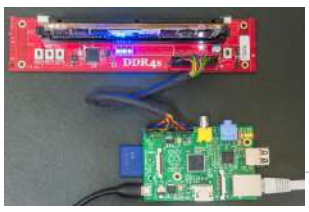
Prototyping Circuit Boards Someone recently turned me onto prototyping circuit boards from dipmicro.com and wow! Awesome! (So you know, I am in no way affiliated with dipmicro, I was just really impressed) Yes, that's right, I'm excited about prototyping circuit boards. Let me tell you why, then let..... Listed under: Blog, Development Board - Kits Projects

1283. 

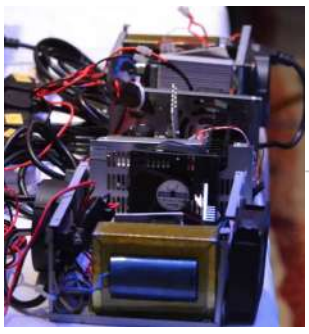
Raspberry Pi lirc_rpi – (IR Remote control) LIRC GPIO driver The driver: The driver is actually a modification of the lirc_serial module. I decided to create a new one separately because I couldn't hack it into the serial nor the gpio driver. The serial driver uses the DCD of the serial port, which is not..... Listed under: Development Board - Kits Projects

1284. 

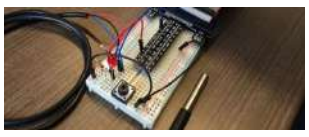
WhatsApp on Raspberry Pi In this tutorial we will see how to use WhatsApp with Raspberry Pi. We will use the Yowsup library we had already used in these tutorials: WhatsApp message from Phidgets SBC , Phidgets WhatsApp - ask the status of your sensors. These days the library..... Listed under: Other Projects

1285. 

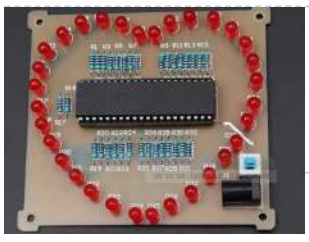
DDR DIMM SPD Adapter for Raspberry Pi All computer DDR memory today have little I2C EEPROMs to store vendor, configuration and module spec information. This is done to allow computer to detect memory type, and configure memory interface to correct speeds and voltages according to module spec. This mechanism is based on..... Listed under: Other Projects

1286. 

Building a Raspberry Pi Cluster – Part 2 The Grand Finale In a previous post on Building a Raspberry Pi Cluster, I wrote about how we built a cluster using several Raspberry Pis. This cluster was used for hosting the WSO2Con App. In this post we will take a look at the finishing touches..... Listed under: LED Projects

1287. 

IoT 101 Project: Stream Temperature from your Raspberry Pi "Hello World!" – This is likely the output of the first program you ever wrote when learning how to code. Setting up a device to stream temperature data is quickly becoming the de facto Internet of Things (IoT) "Hello World!" project. If printing "Hello World!"..... Listed under: Temperature Measurement Projects

1288. 

ICStation Heart-shaped Colourful Dazzle Light DIY Kit 1. The circuit description This circuit is consist of the STC89C52 minimum main system and 32 colorful LED display components. It uses the STC89C52 Microcontrollers as the control chip and drives 32 I/0 to control the 32 F5 colorful LED.(We have finished the Microcontroller program for the DIY..... Listed under: LED Projects

1289.

Biosignal PI, an Affordable Open-Source ECG and Respiration Measurement System Farhad Abtahi 1,*, Jonatan Snäll 1, Benjamin Aslamy 1, Shirin Abtahi 1, Fernando Seoane 1,2 and Kaj Lindecrantz 1,3 1 School of Technology and Health, Royal Institute of Technology, Alfred Nobels Allé 10, Stockholm SE-141 52, Sweden; E-Mails: jsnall@kth.se (J.S.); aslamy@kth.se (B.A.); shirin.abtahi@gmail.com (S.A.); fsm@kth.se..... Listed under: Temperature Measurement Projects

1290.

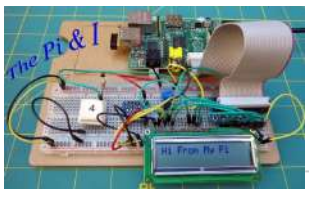
Geiger Counter – Radiation Sensor Board for Raspberry Pi tutorial Contents Manifesto The Board The Geiger Tube Types of radiation Supported Geiger Tubes Testing Sources Actuators From CPM to Sieverts Source Code Schematic Participate Buy Links and Documentation NOTE: All the code examples in this tutorial use the arduPi library. You can see the documentation..... Listed under: Sensor - Transducer - Detector Projects

1291.

Use Raspberry Pi to Create Obstacle Avoiding Robot Chassis Raspberry Pi is quite suitable for robot creation. Its GPIO pins could be used to control the motors and sensors, and itself could work as a server, and get controlled via Internet. The Plan I am going to create a robot chassis, which could automatically..... Listed under: Motor Projects

1292.

Raspberry Pi – Jack of all trades. Raspberry Pi is a sort of jack of all trades when it comes to being a single board computer based on the Arm processor. It can be a desktop, media player/streamer, web server, forensics machine, and do most of what all linux based machines can..... Listed under: LCD Projects

1293. 

Jig To Load a Bootloader and Upload Sketches To ATmega328P Note: I only write about what I know. Although there are many Arduinos and Arduino type products, I only have experience with the Arduino Uno Rev3. Likewise, the only Atmel microcontroller I know is the ATmega328P. A Little Background (well not so little) I have..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1294.

Bluetooth Speakers using Raspberry Pi hi guys long time since i wrote a tutorial, this tutorial tells you how you can use any old speaker lying around your house into a wireless bluetooth speaker, this can also be an cheap bluetooth audio device receiver for your car. This is not..... Listed under: Bluetooth Projects

1295.

Raspberry Pi Powered Lego Car Two things have happened recently that have contributed to my tinkering hobby. Firstly - My Raspberry Pi arrived after a long (but worth it) wait. Secondly - My two girls (8 and 5) have got in to Lego and so slowly but surely I've been..... Listed under: Game - Entertainment Projects

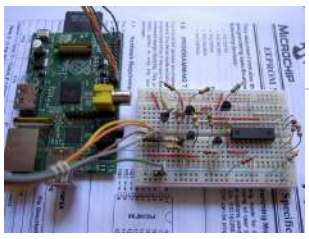
1296.

Raspberry Pi PC remote power switch control board The default I/O port of SD card is 8081, you can change it. Use putty, ID pi, password 5585, key "sudo nano /etc/apache2/ports.conf", find out 8081 to change your desired port. Features: Plugs directly onto the Raspberry Pi GPIO socket Fits Directly over the Raspberry..... Listed under: Development Board - Kits Projects

1297.

Raspberry pi print server A print server that tastes of pi. This project assumes that you have the latest version of raspbian (which can be downloaded at) https://www.raspberrypi.org/downloads/raspbian/. And an active internet connection. (When imaging the SD card be careful to select the right device otherwise BOOM! There goes..... Listed under: Other Projects

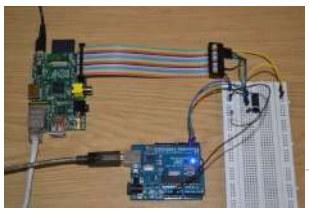
1298. rpp – Raspberry Pi PIC Programmer using GPIO Introduction Microchip PIC® 8-bit microcontrollers are quite popular amongst hobbyists, and I've used th for a long time in several of my projects. They are very cheap, use only 35 assembly instructions that are easy to learn, and most importantly they use flash



memory, which..... Listed under: Raspberry Programmer Projects

1299. Control Android from Raspberry Pi Have you ever wanted to control your android smartphone or tablet directly from your Raspberry Pi? No? Me neither. I just thought it would be interesting to see if you actually could. You could use this feature to display your android screen during a presentation..... Listed under: Raspberry Android

1300. Raspberry Pi – Driving a Relay using GPIO There's something exciting about crossing the boundary between the abstract world of software and the physical 'real world', and a relay driven from a GPIO pin seemed like a good example of this. Although a simple project, I still learned some new things about the..... Listed under: How To - DIY - Projects

1301. 

Raspberry Pi and Arduino via GPIO UART In an attempt to get my Raspberry Pi talking to my Arduino I'm exploring various different options. The first was to just use the USB connection, but that was too simple. So, here is how to connect the two using the UART on the GPIO..... Listed under: Development Board - Kits Projects

1302.

Medicine Reminder using Arduino Sometimes patients forget to take the medicine at the required time of medicines. And sometimes patient also forgets which medicine He/She have to take at required time. And it is difficult for Doctor/Compounder to monitor patients around the clock. To avoid this problem, we have..... Listed under: Medical - Health based Projects

1303.

Web Based, Raspberry pi controlled, 2 channel relay mains control box. Using some off the shelf relays and some basic electronics components coupled with a Raspberry pi with basic HTML, PHP and javascript programming, this Web Based relay control box can be used to turn on or off devices that are connected to the box's plugs..... Listed under: Internet - Ethernet - LAN Projects

1304.

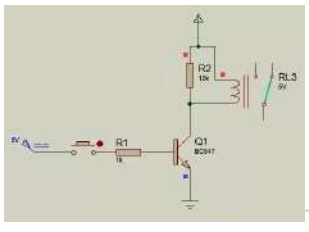
Tank Day 23: Range and Bearing Step 1: Choose Sensors Two sensors were chosen for the Raspberry Tank's first foray into detecting its environment: An ultrasound rangefinder (SRF02) and a 3-axis compass (CMPS10), both ordered from robot-electronics.co.uk. Beyond their I2C interface, these devices were chosen largely for cost reasons, though they..... Listed under: Game - Entertainment Projects, Robotics - Automation Projects

1305.

Simple Raspberry Pi B+ case In this instructable I will show you how to build a simple case for the Raspberry Pi B+. I used a template I found on the internet, which should be used for a paper case, but I decided that for me a paper case is..... Listed under: Other Projects

1306.

ircam raspberry pi shield — first steps Here are some first passes at a Raspberry Pi shield design. I don't quite yet know what I'm doing, but here's the rough idea I'm aiming at. I'm not sure how sensible it is, so I'd love to get any feedback! It'd be nice to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1307. 

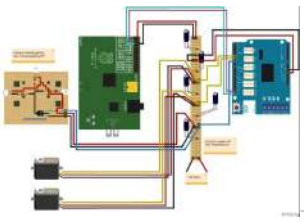
Temperature based device Control system using LM35 A temperature based device control system which uses AT89s52 and LM35 temperature sensor is an embedded system which controls external devices(mainly an household appliances heater,fan,coolers and many more) by monitoring the temperature obtained from temperature sensor. This project called temperature based device control system can..... Listed under: Temperature Measurement Projects

1308.

Safe and simple AC PWM Dimmer for arduino / Raspberry pi Dimmer With MOSFET This circuit shows that dimmers intended for use at mains voltage do not always have to contain a triac. Here, a MOSFET (BUZ41A, 500 V/4.5A) in a diode bridge is used to control the voltage across an incandescent bulb with pulse-width modulation..... Listed under: PWM Projects

1309.

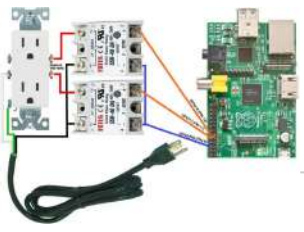
ESP8266 + Raspberry Pi Electricity Monitor I have always been monitoring my utility meters in the old fashioned way. First I wrote them down in a little ledger (yep, I'm that old), later I wrote a spreadsheet for it and the last few years I'm using the ECAS smartphone app to..... Listed under: Metering - Instrument Projects

1310. 

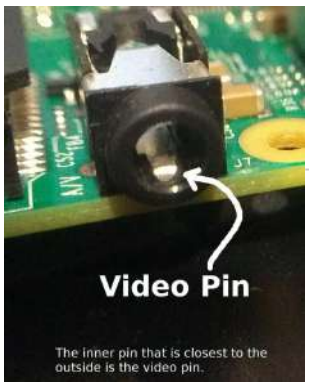
RaspiDuinoRover – (Yet another) iPhone driven moving Raspberry Pi and Arduino rover Architecture RaspiDuinoRover is made of three main parts: A Raspberry Pi which receives commands from a remote device through a TCP connection, and sends these commands to an Arduino Uno through an I2C connection. The same TCP channel is used to send back the remote..... Listed under: Development Board - Kits Projects

1311.

Raspberry Pi and Button Press Example Hi there. This post is not going to be on JavaScript but it will be a bit more centered on the Raspberry Pi and what I did today. As pointed out in an old blog post, I'm working on a software that creates streams of..... Listed under: Other Projects

1312. 

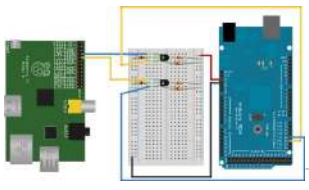
Using the Raspberry Pi to control AC electric power We were trying to figure out if a Raspberry Pi could be made to control a device that is powererd by 120 volts AC. Our first idea was to build a device based on this wiring diagram, which would have let us control two electric..... Listed under: Solar energy projects

1313. 

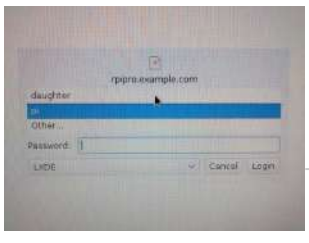
Raspberry Pi 2: Quick n' Easy RCA Hello world, today I am bringing you another instructable at the request of another member. I recently made an instructable about booting the Raspberry Pi from a usb flash drive (Boot the Raspberry Pi from USB). In that instructable I had my RCA connection "jerry-rigged"..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1314.

Setting up Raspberry Pi using SSH So you just bought a Raspberry Pi (RPi) because you heard of it and you want to figure out what you can do with it (like I did some time ago). But now you have it you are watching ad it and asking..... Listed under: Development Board - Kits Projects

1315. 

Arduino Pi Step 1: Step 1: Connecting the Arduino and Raspberry Pi This step assumes you are using the external UART for connecting the Raspberry Pi with an Arduino Mega 2560. It's also possible to use this with another Arduino. The Arduino uses 5V logic but the..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1316. 

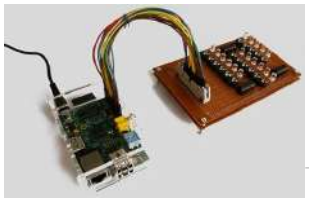
Beautify Raspberry Pi Login Screen Introduction The login screen that greets the user can be modified to make it more interesting and colourful. The login sccreen and greeter means the same thing in this instructable. Scope This instructable will show how to: Change image on greeter Add text messages Prerequisite..... Listed under: Security - Safety Projects

1317.

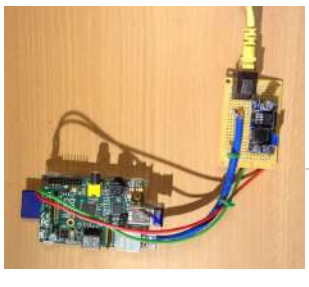
Documentation: RFID 125 kHz shield for Raspberry Pi tutorial Contents: Introduction Steps Index Links and Documentation Introduction Ingredients: 1 x Raspberry Pi 1 x RFID 125 kHz shield for Raspberry Pi 1 x RFID Antenna 2 x Read only cards (EM4100) 2 x Programmable cards (Read-Write Cards, T5557) NOTE: If you don't have a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1318.

Programmable Thermostat with the Raspberry Pi Required hardware: Raspberry Pi model B Dallas DS18B20 temperature sensor Relay board Push button LCD display (Nokia 5110-3310) Edimax WiFi nano USB adapter Software installation Some packages are required from the standard Raspbian repository: apt-get install python-dev apt-get install python-imaging We need also PIP (a..... Listed under: LCD Projects

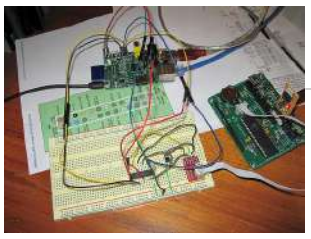
1319. 

Raspberry Pi Binary LED Clock Binary clocks show the time in an unconventional format. They display the hours, minutes and sometimes even seconds as numbers represented in the binary numeral system. Binary clocks and binary watches have grown quite popular today. More and more people work in IT and become..... Listed under: LED Projects

1320. 

PiPoE – powering a Raspberry Pi over Ethernet This project enables a Raspberry Pi, Beaglebone, or other small computer to be powered over an Ethernet cable. This very handy if you have a Pi somewhere where getting mains power to it is difficult, or if you want to run several devices from one..... Listed under: Internet - Ethernet - LAN Projects

1321. AVR/Arduino ISP programmer using the Raspberry Pi GPIOs Introduction As a fully-featured Linux computer there are many external programmers that ca used with your Raspberry Pi to program the Atmel AVR range of microprocessors. It's also possible to use the general purpose input/output lines (GPIOs) found



on the Raspberry Pi to implement..... Listed under: GPS Based Projects

1322.

Introducing the Raspberry Pi Model B+ Power Supply LADY ADA One of the most exciting updates/upgrades of the new Model B+ is a fancy new power supply. The power supply of a computer is terribly boring sounding, but its really important. A good power supply makes everything hum along cleanly. A..... Listed under: Phone Projects

1323.

DIY SPY BOT PI Kit- Raspberry PI Spy robots are remotely controlled robots, equipped with a camera, transmitting video data to the remote area. A movable spy robot with a remote controller by using raspberry pi. The spy robot is made up of a USB camera, Wi-Fi adaptor, batteries and movable wheels..... Listed under: How To - DIY - Projects

1324.

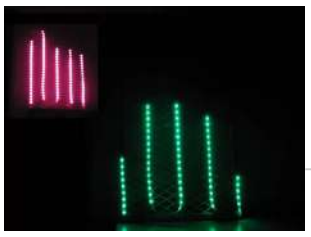
Setting up and running NOOBS on a Raspberry Pi In this instruction I will go over how to set up the Raspberry Pi and boot it into NOOBS for the first time. It is important to understand how to set up all of the hardware and how to set up the actual operating system..... Listed under: Development Board - Kits Projects

1325.

Introducing Ponte: Arduino – Raspberry Pi Bridge (This is a collaboration between myself and my friend and purveyor of fine electronic bits, S.K. Pang) How would you connect an Arduino to a Raspberry Pi? Just plug it in via USB as you would normally do with an ordinary computer, right? That takes..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1326.

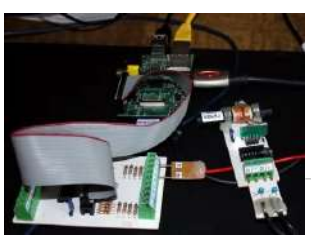
Raspberry Pi Website Hit Tracker You just made a funky neon sign flash in my living room. How? I have just completed my latest project which is a neon lamp which lights up every time someone visits my website. It's controlled by a little relay board I built out on..... Listed under: Development Board - Kits Projects

1327. 

Raspberry Pi Spectrum Analyzer with RGB LED Strip and Python Looking for a first project to try out on a Raspberry Pi, I though what better than a Spectrum Analyzer? (Sometimes this display is erroneously referred to as a graphic equalizer--that let's you change the sound, not display it) I was able to get it..... Listed under: LED Projects

1328.

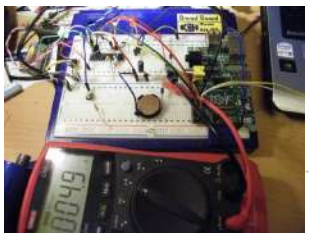
Raspberry PI: Connecting a HD44780 Display over I2C Bus some application, i.e. XBMC can show informations on a display by using LCDproc as driver. This post describes a way to connect a HD44780 display to a Raspberry PI by i2c bus. Let's start with the physical layer. This is the overview schematic on how..... Listed under: Video - Camera - Imaging Projects

1329. 

An MSF Atomic Clock for the Raspberry Pi The project is connected to GPIO 15 input pin 1 of my Raspberry Pi interface board. There is nothing special about this pin, its location is simply convenient with my layout.. Please be aware that this project will only work in the British Isles, because the transmitter..... Listed under: Clock - Timer Projects

1330.

Use a bare Arduino as an RF signal processor for Raspberry PI 433mhz RF transmitters and receivers are really cheap, so you might be tempted to add a RF receiver to your Raspberry PI. But there is one problem: the Raspberry PI may not be fast enough, or may be blocked totally while it tries to keep..... Listed under: Development Board - Kits Projects

1331. 
Raspberry Pi Power Controller This article is a work in progress to create a power-controller for the Raspberry Pi based on a PIC microcontroller and MOSFET. The PIC implements an I2C slave to allow power control, and also to approximate the registers of a PCF8563 Real Time Clock (RTC)..... Listed under: Other Projects

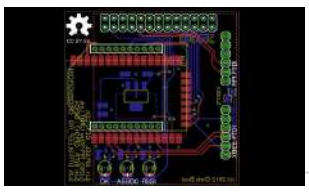
1332.
Open brain wave interface hardware you can go directly to Section 9 also. make high quality brain wave interface as low cost and small size is my over 20 years of dream. To do so need mass production, need work with investor to realize that way. not just only my..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1333.
Headless Raspberry PI WiFi setup (for mobiles) So you successfully confiured your RaspberryPi in a fully headless fashion, maybe with WiFi too, and you are very happy using it at home in your robotic projects... But when you go outside, at work or on any foreign network, once powered and connected to..... Listed under: Wifi / WLan Projects

1334.
Creating a “Blinking LED” project for Raspberry PI This tutorial demonstrates how to attach a LED to the expansion connector on your Raspberry PI and to make it blink with a simple C++ program. First of all, in order to programmatically switch a LED on and off we need to connect it between..... Listed under: LED Projects

1335.
Airplay Multiroom radio with the Raspberry Pi, no additional hardware needed. Most ways to stream music to multiple sets of speakers cost more than it is worth. I don't think I have to say much about it, you probably wanted to do this in the past but it just seemed stupid to spend that much money..... Listed under: Wifi / WLan Projects

1336.
AVC: Serial to I2C Bridge I finished designing, etching and silkscreening a new board last night and started populating it. It's a slight redesign of a board I did before last year's AVC. What's it for? Not telling yet. 🙂 I can say this. It's an Arduino clone that will..... Listed under: Development Board - Kits Projects

1337. 
Raspberry Pi XBee SMT backpack One of the earliest motivations for my work on the Raspberry Pi SPI driver was so that I could use some Digi XBee ZB SMT modules. These are basically the same as the normal XBee ZB modules for doing ZigBee with but are on little..... Listed under: Development Board - Kits Projects

1338.
Turn an old CRT Television into a Raspberry Pi Powered MAME Cocktail Cabinet Here I will show you how I went about building my arcade machine that uses a Raspberry Pi running MAME to emulate games. As everyones setup will be different this will be general in nature but will hopefully supply enough information so you can get started yourself..... Listed under: Game - Entertainment Projects

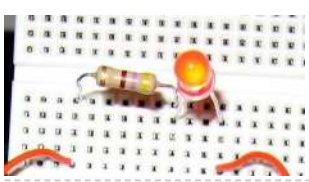
1339.
TiddlyWiki 5 on Raspberry Pi Server in 15 minutes Introduction Raspberry Pi's are inexpensive credit card sized computers conceived by Eben Upton and designed by the Raspberry Pi Foundation Team in the UK. They are now built in the UK as well. TiddlyWiki 5 is the latest version of TiddlyWiki which was created by..... Listed under: Other Projects

1340.
Get Started With Raspberry Pi Hello everyone. Welcome to my First Instrucatble. You may be asking yourself "I want a Raspberrry Pi, but I don't know how to start." If you have ever asked yourself this thought, than this is the right Instrucatble for you. In this guide you will..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1341.
Powering a Raspberry Pi with a 5W solar panel My plan was to make a solar powered raspberry pi. To run a Facebook AIML chat bot written in c#. (In the daytime) What you will need: 1 x Raspberry pi (we used model B) 1 x 5 Watt solar panel with USB connector 2..... Listed under: Other Projects

1342.

Mapillary en Raspberry Pi Desde hace poco tiempo me he hecho fan de la comunidad Mapillary y su proyecto, he visto personas usar su smartphone, GoPro y algunos otros tipo de camaras para mapear su ciudad, es por eso que he realizado este proyecto para mapear mi ciudad con..... Listed under: Phone Projects

1343. 
LED Blinking with Raspberry Pi One of the classic electronic analogy to "Hello World" is to make an LED blink. Raspberry Pi has 8 General Purpose Input/Output pins(4,17,18,21,22,23,24,25) which can be configured as input/output and turned on/off via software.In this Instructable I will be using python to control the..... Listed under: LED Projects

1344. Turn Raspberry Pi ON w/ Remote Control I'm loving using my Pi with Openelec for my media center, but the need to pull the cord to cut power was just keeping it below the WAF(Wife Acceptance Factor). So I sat down and came up with this. In the future, the arduino will..... Listed under: Wireless projects

1345.

[Raspberry Portable Pi Laptop](#) Portability would generally be the main challenge with projects such as this; it can be difficult to get power off grid. However, in my case this is one hurdle which I am able to easily overcome; as with all of my other projects I have..... Listed under: [Development Board - Kits Projects](#)

1346.

[Home Automation using Raspberry Pi, Arduino, Domoticz, MySensors.](#) Hi Fellow makers, This is my first Instructable on Home Automation. The idea is to build a controller and wireless nodes to control and monitor. After a lot of hit and trial with many different controllers like OpenHab, DomotiGa, Ago Control, finally I decided to..... Listed under: [Home Automation Projects](#)

1347.

[Make a Portable Computer Using a Raspberry Pi](#) Have you ever wanted a portable computer you can take with you? This is the easiest way to build your own. For those of you who do not know what a Raspberry Pi is, it is a complete computer about the size of deck of..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1348.

[Easiest Raspberry Pi Camera Mount Ever](#) I bought the camera for the Raspberry Pi, and the after market mount just didn't suit my taste. At the same time I also bought a clam-shell case (~$6) I was padding the bill for free delivery, looking at the case it seemed that it..... Listed under: [Video - Camera - Imaging Projects](#)

1349.

[A DIY Power Supply For Hi-Fi USB Audio With Your Raspberry Pi](#) Overview This is a guide for building a DIY power supply/regulator for powering a Raspberry Pi and a USB audio output interface. The objective is to create a pure, regulated 5.0v power supply that allows the Raspberry Pi to run stably but also, more importantly,..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1350.

[Raspberry Pi Bluetooth](#) Hello, I'll teach you how to successfully install and use Bluetooth on your Raspberry pi. Just a heads up I'm assuming you have a version B and you've setup your raspberry pi already (for system preferences and ect.) Step 1: Hardware 1. You'll need a..... Listed under: [Bluetooth Projects](#)

1351.

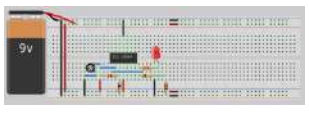
[Raspberry Pi Robot controlled over Bluetooth](#) This tutorial is based on a previous Instructable - Building robots with Raspberry Pi and Python The aim is to present an example of how to setup a Bluetooth serial connection with Arduino to control a Raspberry Pi robot. But lets take it one step further..... Listed under: [Robotics - Automation Projects](#)

1352.

[Raspberry Pi Water Cooler](#) Hello, this is a step-by-step guide to building a water cooling system for the Raspberry Pi's ARM processor. It all started when I say this project. I was instantly captivated, the thought of water cooling a pi had never occurred to me but once I..... Listed under: [Other Projects](#)

1353.

[Raspberry Pi Case](#) I made this case before my school offered 3d printing but i still decided to post it anyway. Step 1: Materials These are the materials youll need .• A block of wood • Acrylic • Raspberry pi • Screws • Nuts • Spacers Tools • Caliper •..... Listed under: [Home Automation Projects](#)

1354. 

[Water Tank Overflow Alarm](#) Wastage of water is quite prominent in urban as well as rural areas and overflowing of water tanks is a major reason for that. This water tank overflow circuit described here starts ringing as soon as the water tank becomes full. Thus, by warning the..... Listed under: [Home Automation Projects](#)

1355.

[How to use a kindle fire as a monitor for raspberry pi](#) In this intractable i will show you how to use a kindle fire as a monitor for a raspberry pi. I had an old kindle fire that i got a few years back that i no longer use and i thought, why not use it..... Listed under: [LCD Projects](#)

1356.

[Raspberry PI + Motorola Lapdock] A few months ago I found through a MOOC at Universidad Galileo, that was possible to convert a Raspberry PI in "almost" a laptop. This idea caught my attention, by turning this "micro" in an independent computer. I investigate how to do it and I..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1357.

[Raspberry media player casing] Look at this Raspberry board. Its is a good choice if you want to make your own internet and multimedia station to play HD movies, browse on the web watch Youtube trailers listen your MP3 collections for literally peanuts. All you need to do, plug all..... Listed under: [Video - Camera - Imaging Projects]

1358.

[Simple, scalable Raspberry pi garden irrogation] This is one of the projects I'm currently working on. The idea behind the project is to build a simple yet scalable and eficiant garden irrogation, using as little resources as posible. The end product will be a IOT garden project, but I'll update you..... Listed under: [Other Projects]

1359.

[Open Source Home Automation Project using Arduino UNO + Ethernet Shield] How Does it Work The main brain for this project is Arduino UNO Board along with Arduino Ethernet Shield to give it a wireless connectivity.Arduino runs a code to control a Relay board according to the input and also serves a web page through which..... Listed under: [Home Automation Projects]

1360.

[Raspberry Pi + Arduino Serial with LCD Screen] Intro This is my Raspberry Pi info LCD, I wanted to try and get the Arduino and Raspberry Pi talking to each other through USB serial and I made this little project. The Raspberry Pi uses a python script to get the data and then..... Listed under: [LCD Projects]

1361.

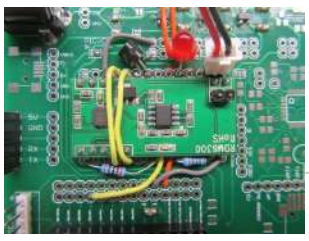
[Raspberry Pi Internet Monitor] In my house, you can often hear someone shouting "Is the Internet down?" Sometimes it is but most of the time it's a "user problem". I decided to build a gizmo that would make it easy to tell whether the internet connection was working or..... Listed under: [Internet - Ethernet - LAN Projects]

1362.

[Use ssh to talk with your Raspberry Pi.] This brief guide explains how to use ssh to talk with your Raspberry Pi. You will need: 1 Raspberry Pi connected to your router (Monitor and keyboard.) If you are looking for a guide to access your Raspberry Pi from the internet look here: http://www.instructables.com/id/Raspberry-Pi-as-webserver/..... Listed under: [Other Projects]

1363.

[Floppy Drive music /w Raspberry Pi] Use your Raspberry Pi to control a floppy drive to make music! Step 1: Materials Raspberry Pi ATX power supply (can be found in old computers) Floppy drive Breadboard Wires (9 female to male and 1 male to male) Step 2: Connect the floppy drive..... Listed under: [Sound - Audio Projects]

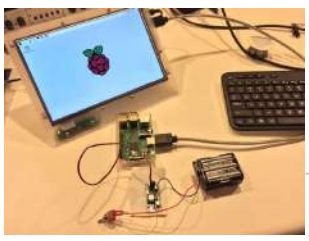
1364. 

[RDM6300 RFID with PIC18 Dev Board] After getting a simple LED-blink program working, I moved on to the RFID portion of my project. It seemed to be the simplest of the three major parts (RFID, SD card, and MP3) because it's basically just configuring the UART to receive and check the..... Listed under: [RFID - NFC Projects]

1365.

[Telegram on Raspberry Pi] In one of our last tutorials we have installed WhatsApp on Raspberry. Whatsapp at the moment is definitely the most famous app for messaging services, but there are also many alternatives although little known. One of these is Telegram. "Telegram is a cloud-based mobile and..... Listed under: [Other Projects]

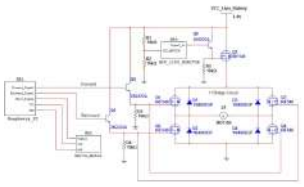
1366. [Raspberry Pi Arcade] A few months ago, I decided that I wanted an all-in-one arcade machine. I started looking for some info on how to build one, and immediately, the name "Raspberry Pi" came up. This Christmas, I got a couple of them. I started experimenting with a..... Listed under: [Home Automation Projects]

1367. 

[Raspberry Pi powered by batteries] In this instructable I will show you how to properly supply power to a Raspberry Pi or Pi 2 with a battery pack or any voltage between 2.9 -32 volts DC. I will be using a efficient Pololu Step-Up/Step-Down Voltage Regulator and a toggle switch..... Listed under: [Solar energy projects]

1368.

[Raspberry Pi B & B+ boot SD card for PROTA OS (HTML5 UI)] Follow this instructable to get your PROTA OS up and running on your Raspberry Pi without pulling too much hair. NOTE for your understanding PROTA OS is an alternative, headless-oriented OS for Raspberry Pi for people like me who seek I-just-want-to-plug-and-use. Burning the image, I'd..... Listed under: [Other Projects]

1369. 

[H Bridge Control using Raspberry PI / Micro controller] I am looking for input on this circuit that I have designed. I am currently working on a project called the Net-EEL RC Car. It is an RC car that will be controllable using Network Socket Servers / Clients. Therefor, you will be able to..... Listed under: [Other Projects]

1370.

[Raspberry Pi & the Neo 6M GPS] Previously I built a project where I connected a Neo-6M to an Arduino, but this time around, I wanted to show how to use a GPS with the Raspberry PI. Now there are several USB solutions, and apps that work with them, but I wanted..... Listed under: [GPS Based Projects]

1371.

[Automated Aeroponics System Using Raspberry Pi] In this Instructable, we'll learn how to make an Aeroponics system that's controlled via the Raspberry Pi, and uses the Raspberry Pi Camera module to take photos of your plants. Aeroponics is a pretty unconventional method of gardening, but that's what makes it fun!Aeroponics makes..... Listed under: [Home Automation Projects]

1372.

[Old PC Accessories + Raspberry PI = DoorCam & surveillance Kit] Step 1: You will need Raspberry PI B (this project is based on B+ model) 5V Raspberry PI power supply A couple of PC speakers TV/Monitor with composite input and its power supply 3.5mm jack to RCA A/V cable Compatible webcam (see at: http://elinux.org/RPi_USB_Webcams) Three..... Listed under: [Video - Camera - Imaging Projects]

1373.

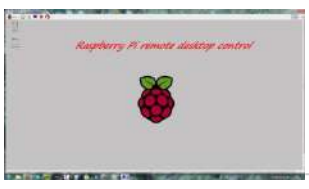
[Using Phidgets on a Raspberry Pi 2] Hello Makers, In this instructable I will be showing you how to prepare a Raspberry Pi2 for use with a Phidgets Interfacekit 8/8/8 The Products from Phidgets allow you to connect sensors an actuators to your pc/pi/mac through the usb port. Most of the sensors..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1374.

[Home Raspberry Pi Project] I just received a shiny, brand-new Raspberry Pi in the mail today! I've only been playing around with it for an hour or so but I already love this little device! It only took me about 30 minutes to go from unwrapping to running, which..... Listed under: [Home Automation Projects]

1375.

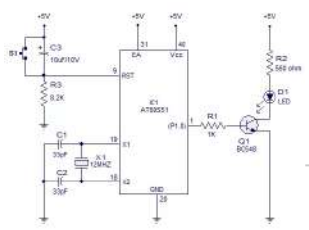
[Motion Detection Alarm System] A basic USB camera can be used to detect motion in a room. In the following steps we will show you how you can use Reactive Blocks to program a ready to run Java application that sends SMS when motion is detected. With Reative Blocks..... Listed under: [Sensor - Transducer - Detector Projects]

1376. 

[Remote desktop from Windows to Raspberry Pi] Instead of connecting your Raspberry Pi to a large TV monitor why not use Windows Remote Desktop Protocol to access your Raspberry Pi computer? In this ible I'll show you how to use the windows remote desktop protocol to access your Raspberry Pi computer. Step..... Listed under: [Raspberry Programmer Projects]

1377.

[Roberts 747 – DIY Raspberry Pi internet radio/streamer] Roberts 747, great radio from 1990. Fully working in very good condition. Found it on antique sale after a long hunt for something like this. I have a spare Raspberry Pi model B V1 home as a spare and it was just catching dust for..... Listed under: [Radio Projects], [Wireless projects]

1378. 

[Blinking LED using 8051] This is the first project regarding 8051 and of course one of the simplest, blinking LED using 8051. The microcontroller used here is AT89S51 In the circuit, push button switch S1, capacitor C3 and resistor R3 forms the reset circuitry. When S1 is pressed, voltage..... Listed under: [LED Projects]

1379.

[Piulator Portable Game System via Raspberry Pi] This project was a lot of fun to put together. I was looking for a good Christmas present for my nephew, and decided that a Raspberry Pi influenced project would be cool. He likes gaming and computers, so this made sense. I made an identical..... Listed under: [Game - Entertainment Projects]

1380.

[Shrink Your Raspberry Pi With MicroSD Card Slot] The Raspberry Pi itself is about the size of a credit card, but it only has a standard full sized SD card slot. When you plug in a standard full sized SD card into it, the card sticks out of the outline of the Raspberry..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1381.

[Low Power Raspberry Pi Fileserver] This is a low power home file server I built from a raspberry pi and two USB drive cases. I've mapped it as a network drive on all of my home computers, so we have one common repository for files, documents, and pictures. It's set..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1382.

[How to use and Arduino shield with the Raspberry Pi] Adding Arduino shields to the Raspberry Pi can be a very big pain. You end up having a mess of wires running around and setting up the software is a challenge in it's own right. Here is a simple solution to start using your own..... Listed under: [Other Projects]

1383.

[MCP3008 Raspberry Pi Breakout hat] Howdy Y'all Back when I was working on the Raspberry Pi portable emulator that became the backseat system. I thought that I would want to use an analog joystick like several of the other builds. However I was trying to get it to work via..... Listed under: [Development Board - Kits Projects]

1384.

[ThingSpeak Temperature Monitor with Raspberry Pi] Step 1: What You'll Need A RaspberryPi BrickPi 9 V battery – for powering the BrickPi board and sensor Dexter Industries Thermometer Step 2: Signup for Thingspeak First signup for the new account in thingspeak at https://www.thingspeak.com Step 3: Login to Thingspeak Login to your..... Listed under: [Sensor - Transducer - Detector Projects]

1385.

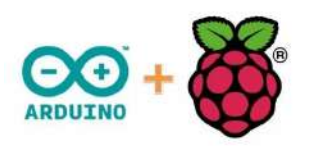
[Iteaduino Plus – ARM Cortex-A8 Dev-Platform] ITEAD studio is based in Shenzhen, China, which is located with China's biggest electronics market as well as one of the most integrated electronic supply chains in the world. A vast number of exciting and innovative products are designed, sourced and manufactured around us every..... Listed under: [Other Projects]

1386.

[AirPlay Radio with Raspberry Pi and WiFi] Before I started working for Pelagicore I won two Raspberry Pi's (short RP) which they sponsored. One because I was one of the first people on the foss-gbg mailinglist which they started. It is for people from Gothenburg and surroundings who would like to join..... Listed under: [Wifi / WLan Projects], [Wireless projects]

1387.

[Raspberry Pi FPV on RC TerraDrone] My progeny loves operating our Nerf TerraDrone named James. He is able to animate James while trying to stay out of sight so I got the idea of using the Pi Surveillance Project by Michael Castor from the April/May 2015 edition of Make Magazine to..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects], [Video - Camera - Imaging Projects]

1388. 

[How to Make a Arduino+Raspberry Pi Robot Platform] This is not the definitive story on Pi and Arduino orchestration. Just my version. Step 1: Berryboot 1. Get Berryboot. Berryboot will allow you to download several Raspberry Pi images. Step 2: SD Card Preperation Now extract the zip files to a blank SD card..... Listed under: [Robotics - Automation Projects]

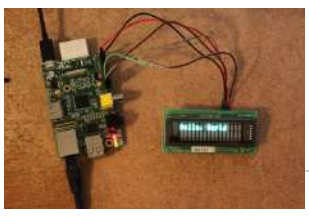
1389. [Raspberry Pi 2 Media Center: Kodi on XBian] Overview This guide walks through the construction and configuration of a home media center from parts to running system. After following these steps, you will have a running Kodi media server on a Raspberry Pi 2 in an Altoids tin case, ready for you to..... Listed under: [Video - Camera - Imaging Projects]

1390. (Week 13) Testing with 16×2 LCD screen and Raspberry Pi using Fritzing Here, i want to testing between 16×2 LCD screen with Raspberry Pi. As you can see from my previous blog, the circuit have been construct based on this connection. If there had no problem with all the connection, I will proceed to combine it with..... Listed under: LCD Projects

1391. Using the Raspberry Pi to control an ATX power supply I'm really enjoying my new 3d printer, but I just can't leave my laptop connected to the printer all the time. I know that i could simply use SD cards or use another host computer, but there are better options. In order to untether myself..... Listed under: Other Projects

1392. Simple Snap Together Raspberry Pi Wood Case This is a simple low cost wood case for the Raspberry Pi version 1 rev B that I built based off the Adafruit Pi Box (http://www.adafruit.com/products/859). Assembly is simple, all the pieces snap together so no glue or nails are needed. I used this project..... Listed under: Other Projects

1393. Raspberry Pi Colored Server Case Mod The purpose of this mod is to create a case for the Raspberry Pi, based on Adafruit's case created by Mike Doell. It will have a better airflow and be easily identifiable by color. For this project you'll need: Heatsink Heatsink compound A Mike Doell..... Listed under: Other Projects



1394. Interfacing a VFD display to the raspberry pi I'm in the process of building a home automation controller using my Raspberry Pi, and I figured it would be cool if it could display the current song and artist on my Pandora player. There were many options for a display — I could go..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

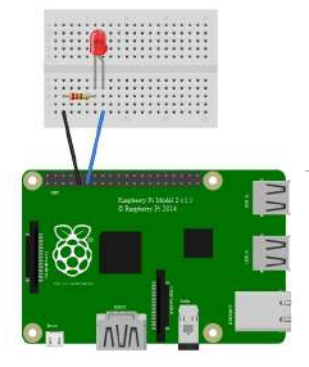
1395. Modelling a Raspberry Pi case – from Cardboard 2. Light Pipes This is a very common technique used in design - where for economy you want the lights (LEDs) mounted on a circuit board, but the board is positioned away from the case or user-interface. By taking a piece of clear plastic, one..... Listed under: Development Board - Kits Projects

1396. Raspberry Pi: Launch Python script on startup As I've been working on my own Pi projects, I've been discovering many little tricks and tips by scouring various websites and assembling information, testing and optimizing. So, here is another one of my "meat-and-potatoes" Raspberry Pi Instructables. This Instructable will show you how to..... Listed under: Development Board - Kits Projects

1397. Raspberry Pi online SSH (easy way) Raspberry pi is a mini computer that can be carried easily. Usually people use Raspberry Pi as an embedded platform. And mostly people control or developing something with their Raspberry Pi using SSH protocol. because it much more simple and doesn't take many space. Some..... Listed under: Wireless projects

1398. Dedicated Automobile Traffic Monitor with Raspberry Pi Step 1: The screen The screen I have found a nice screen on ebay for ~18€, a 3.2" TFT LCD Touch Screen, cheap and small is ideal. - Installing raspbian-DVK512-12040725.img To use the touch screen, we run under a Raspbian distribution, you can download the..... Listed under: Phone Projects

1399. Wireless monitor tank robot based on raspberry pi Diy a wireless monitor tank is not difficult based on the raspberry pi, shown in the following picture. Step 1: Materials for the rc tank raspberry pi based monitor 1. Raspberry pi board: http://www.smartarduino.com/original-rpi-raspberry-pi-pie-512m-2-generation_p93783.html 2. Full-functional raspberry pi shield http://www.smartarduino.com/raspberry-pi-pie-rpi-shield-enhanced-v2-release-fully_p94186.html description: All the features include:..... Listed under: Wireless projects



1400. Let's get physical with Docker on the Raspberry Pi With Docker on the Raspberry Pi we are able to connect cloud tools with IoT devices. So how can we interact with the real world from inside a Docker container? Let's see and get physical... To keep the tutorial simple we will use the binary..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1401.

Raspberry Pi Dedicated Internet Radio and Music Player Have you ever wanted something to fill your day with lovely sounds but didn't want to dedicate a PC to this purpose? The Raspberry Pi provides exactly what we need, and with a few component parts laying around, you can control it with a few..... Listed under: Internet - Ethernet - LAN Projects

1402.

Raspberry Pi DropCam Alternative I was looking for a way to check in on my house while away as well as have any motion captured and uploaded to the internet as a security camera. Doing a little research online and realizing that I had a raspberry pi and a..... Listed under: Video - Camera - Imaging Projects

1403.

A Raspberry Pi or Mr. Clock-workers server Part list: Picture No. 1 Raspberry PI model B with 512 MByte ram Raspberry PI camera 16 GByte SD card WLAN USB stick (TP-LINK TL-WN722N) Freecom 500 GByte USB hard disk 4 - Port USB - HUB (Typhoon) Glasdome 11" high / 6,3" diameter Picture..... Listed under: Clock - Timer Projects

1404.

How to get aMule on Raspberry Pi In this instructable I'll show all the steps to get a nice, web managed, aMule node on a Raspberry Pi. The idea born from the need to have a low-cost and low-consuming aMule node always running and connected to internet. I don't like to use..... Listed under: Internet - Ethernet - LAN Projects

1405.

The best Raspberry Pi 2 starter kits compared and reviewed The Raspberry Pi is an amazing low-cost computer. Unlike the ever-popular Arduino microcontroller, the Raspberry Pi was designed to be a full-blown computer from the start. It can run various flavors of Linux/Unix, act as a Media Center, and even moonlight as a Microcontroller. First..... Listed under: Other Projects

1406.

Bitcoin Mining using Raspberry Pi Want to mine some bitcoins? Want to earn for free? Have a pi not being used? Then lets mine some bitcoins! Step 1: What is BitCoin? If you don't know already, Bitcoin is a virtual currency set up in 2009. Bitcoin has grown in reputation..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1407.

Automated vegetable cultivation system Welcome! rSense "Makashitakun" is the automated vegetable cultivation system which is built up with Arduino and Raspberry Pi. Arduino is used for collecting sensors data and handling actuators. Raspberry Pi is used for controller which manage all Arduino units to work properly and hooked up..... Listed under: Other Projects

1408.

Raspberry PI L298N Dual H Bridge DC Motor There are not any examples that I could find that properly show how to get a simple DC motor working with RaspberryPI. This is a simple tutorial for "How to make a motor turn." Robots, wheels, conveyors, and all sorts of stuff can be made..... Listed under: Motor Projects

1409.

Raspberry Pi Soil Moisture Sensor Agriculture consumes between 80 - 90% of all freshwater in the United States. An easy way to conserve water in the agricultural sector is to install a soil moisture sensor. Soil moisture sensors measure the amount of water in the soil to maintain consistent and..... Listed under: Sensor - Transducer - Detector Projects

1410. Interfacing hex keypad to 8051 Hex keypad. In an 8051 microcontroller, it requires 12 cycles of the processor clock for executing a single instruction cycle. For an 8051 microcontroller clocked by a 12MHz crystal, the time taken for executing one instruction cycle is 1μS and it is according to the..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1411.

[Raspberry Pi “Google Glass” – simple and sleek](#) I have had this completed for a while now, but haven't spent the time to make this Instructable which is actually the crux of my project. At the release of the Raspberry Pi, I immediately thought how amazing this would be as a wearable computer..... Listed under: [Internet - Ethernet - LAN Projects](#)

1412.

[Raspberry Pi Portable Games Console](#) Building this Portable Games Console is possibly the most fun I've had using a Raspberry Pi. And it's not just the build that's fun; I've now got a fully functioning games console, so I can play all my favourite old arcade games, on-the-go! There's a..... Listed under: [Game - Entertainment Projects](#), [How To - DIY - Projects](#)

1413.

[Touch Display for Raspberry Pi](#) We add to Raspberry Pi a TFT touch screen to display the system console, movies and favorite photos or control a relay board ... at your fingertips, literally! To avoid using an HDMI monitor the cost well above that of Raspberry Pi, in previous articles we..... Listed under: [LED Projects](#)

1414.

[Turn your Raspberry Pi into a desktop PC](#) How to turn a credit card sized, $35 computer into a fully functional Desktop PC with surprising good performance. Step 1: Installation 1. download NOOBS LITE from www.raspberrypi.org/downloads. 2. copy contents of zip folder onto root of SD card. 3. Connect Pi to monitor, keyboard,..... Listed under: [LCD Projects](#)

1415.

[Ultimate Raspberry Pi Configuration Guide](#) The Raspberry Pi is a great thing: it is real computer, it is cheap ($40), it can interface with electronics, talk to the web and has full HDMI support. However it runs on Linux, which I have a love-hate relationship with. I love the idea of..... Listed under: [Wireless projects](#)

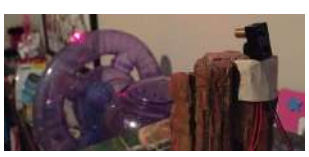
1416.

[Connect-Program Raspberry Pi and a MM5451 LED Display Driver](#) The subject here is connecting the Raspberry Pi to a MM5451 LED display driver. This is written in Python to demonstrate bitwise programming and shift register operation. Using only two input pins (clock and data) for serial date input produces 35 open drain outputs. The..... Listed under: [LED Projects](#)

1417.

[Raspberry Pi Temperature Logger via Radio](#) This project makes use of a raspberry pi, to read the temperature of several radio sensors, and store them on a Sqlite database. The same raspberry pi is used to serve webpages with the graph of the acquired temperatures. See live demo here. Step 1:..... Listed under: [Radio Projects](#)

1418. [X105 EXPANSION BOARD](#) KEY FEATURES Input Voltage - 6V to 23Vdc converted to 5V, 3A via step-down DC/DC converter to power the Raspberry Pi VGA output - HDMI to VGA converter supporting up to UXGA (1600×1200) and 1080p with 10-bit DAC RS232 serial communication - Control the Raspberry..... Listed under: [Development Board - Kits Projects](#)

1419. 

[Turn your Raspberry Pi into a Hamster Fitness Tracker](#) Have you ever wondered just how much your hamster runs throughout the day/night? How far? How fast? My 9 year old daughter did, and we decided to find out. Turns out, it was pretty easy, and the results were unbelievable. Here are the supplies you..... Listed under: [Sensor - Transducer - Detector Projects](#)

1420.

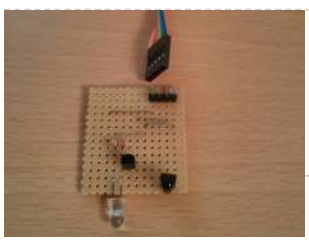
[ICStation Electronic Dice DIY Kit 7pcs 5mm Red LEDs](#) Description Electronic Dice Kit Instructions Electronic dice kit is based on the NE555 oscillator circuit and fun circuit CD4017 counter display kit. Can simulate the dice, make fun of the game. One. Kit parameters: Supply voltage: 4.5-5V Dimensions: 74 * 35mm Two. Function play: When..... Listed under: [How To - DIY - Projects](#), [LED Projects](#)

1421. [Raspberry Pi Webserver](#) Wenn ihr euer Raspberry PI (2) A / B (+) mit Raspbian und aktiviertem SSH bereit habt, können wir sofort loslegen. Für wen ist dies (Web)Server geeignet? Das Raspberry Pi ist schlicht zu langsam, um eine vollwertiger Server zu sein, was mit einigen Einschränkungen doch..... Listed under:

[Internet - Ethernet - LAN Projects]

1422.

[Make a fire detector in minutes with Samsung SAMIIO, Arduino UNO and Raspberry Pi] Let's build an IoT device that sends flame sensor data to SAMI using SAMI's WebSockets. The IoT device consists of an off-the-shelf sensor, Arduino UNO and Raspberry Pi. In this implementation, a Simple Manifest is used to create a new device type quickly. Then you..... Listed under: [Sensor - Transducer - Detector Projects]

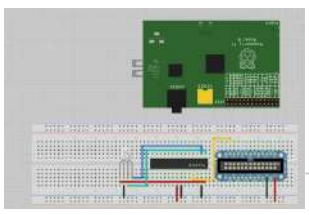
1423. 

[Web-based IR Remote on the Raspberry Pi] There are many devices that use infrared remote controls - TV's, DVD players, cameras, power sockets. So getting a Raspberry Pi to be able to send remote control signals opens up many possibilities for projects. Combining the GPIO pins with a web server on the..... Listed under: [Wireless projects]

1424.

[Raspberry Pi Case Fan] I purchased an inexpensive snap-together acrylic case for my Raspberry Pi from a seller on eBay. Overall I was happy with the case, but although this case has holes for passive air circulation I noticed that after running the Pi in the case that some..... Listed under: [CNC Machines Projects]

1425. [Raspberry Pi – Refrigeration Analyzer] Refrigeration and air conditioning devices consume ~25% of all electricity generated on our planet! From small business owners to franchised restaurant chains to medical facilities the initial, operating, and maintenance costs of refrigeration and air conditioning units can be quite staggering. The biggest factors contributing..... Listed under: [Other Projects]

1426. 

[Wiring RGB LED's] So I've been looking into this a little more. I took your guys idea of using the TLC5940 LED Driver. So now I'm asking for some help again. I figured 1 long question that eventually solves this is better then a bunch scattered throughout stackexchange..... Listed under: [LED Projects]

1427.

[Breadboard Adapter for the Raspberry Pi] We don't need much in the way of parts or tools to build the adapter: Parts: 1x 26-W IDC Box Header 2.54mm 2x 13-W Pin Strips 2.54mm 1x piece of Veroboard / Strip Board 1x 26-W Ribbon Cable with 26-W IDC Headers Tools: Cutters Pliers..... Listed under: [Development Board - Kits Projects]

1428.

[Raspberry pi Pandora's Jukebox] I recently had a Crosley mini jukebox/CD player handed to me with the intention of "fixing" it. The person who gave it to me only ever used it for a radio since nobody listens to CD's anymore, so I decided it would be a much..... Listed under: [Sound - Audio Projects]

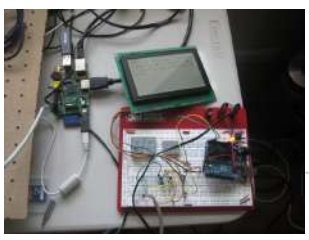
1429.

[Wireless Arduino Control Using the BeagleBone Black or Raspberry Pi] Introduction If you have been looking for an easy and inexpensive way to wirelessly integrate an Arduino and a BeagleBone Black (BBB), or Raspberry Pi (RPi) look no further, this tutorial will show you how! What You Will Need A BeagleBone Black Microcontroller with the..... Listed under: [Wireless projects]

1430.

[Raspberry Pi Remote For Free!] For my first ible I just wanted to give everyone a quick tutorial on how to use the HDMI-CEC protocol to control your Pi with your Tv's remote control. This is very useful because is saves you from having to buy a remote just for..... Listed under: [Video - Camera - Imaging Projects]

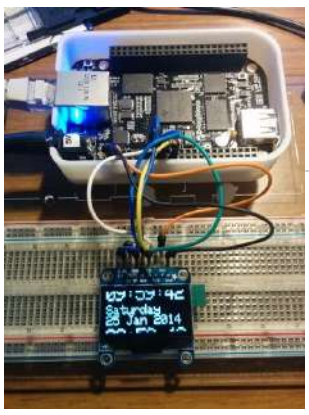
1431. [Raspberry Pi as low-cost audio streaming box] This instructable describes how to extend your audio system with a Raspberry Pi micro-computer to play any local music or audio stream from the internet (including Spotify Premium etc.). The best thing is, that you don't need to have any keyboard, mouse, monitor or TV ... Listed under: [Sound - Audio Projects]

1432. 

[RPi Tutorial EGHS:Communicating With Other Micro-controllers] What is it? I2C ("eye squared cee") is a versatile bus invented by Philips, running over two wires. The bus has been extended to be faster and support more devices on a bus, but the standard definition holds up to 128 devices or so (7-bit..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1433.

[Custom Pool Controller – Arduino and Raspberry Pi] We bought a home with a pool. The first couple of weeks we made several costly mistakes including using the heater to heat the entire pool over 90 degrees. I think we paid $250 for gas that month. We also accidentally drained the spa into..... Listed under: [Other Projects]

1434. 

[Controlling an Adafruit SSD1306 SPI OLED With a Beaglebone Black] What Are We Doing Here? In an earlier post I described how to use the py-gaugette library to drive an Adafruit 128x32 monochrome OLED display from a Raspberry Pi, and a followup article added high-quality fonts. I've now updated the library to run on the..... Listed under: [LED Projects]

1435.

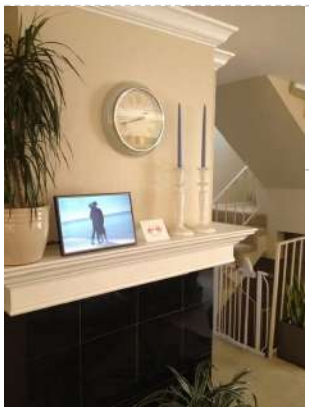
[Autonomous, Cardboard, Rasberry Pi Controlled QuadCopter] Step 1: Materials Cardboard from the recycling bin,The sheet we we used was 32"x20" with a thickness off around 4.1mm. A large clean box should do. Motors from Hobby King, 4x + Propeller clamps, We used Turnigy D3530/14 1100KV Brushless Outrunner Motor at $14.56 each..... Listed under: [Development Board - Kits Projects]

1436.

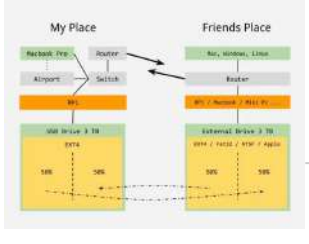
[Google Play Music Internet Radio (Raspberry Pi and Arduino)] I was looking for a project to do with my Raspberry Pi and found this Instructable and thought I would have a go at something similar which worked with Google Play Music. I had a rough idea of what I wanted the final item to end up like..... Listed under: [Sound - Audio Projects]

1437.

[Setting up a PiFace with your Raspberry Pi] This is a basic guide aimed at beginners who have just received a Raspberry Pi / Pi-face and want to know how to set it up, I felt the need to write this up after receiving a PiFace and not be able to find any..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1438. 

[How to Make a Raspberry Pi Media Panel (fka Digital Photo Frame)] The goal of this project was to create a low cost Raspberry Pi Media Panel--a nice looking screen that could stand in the living room or attach to the refrigerator with the primary purpose of streaming personal photo and video content full time, but also..... Listed under: [LCD Projects]

1439. 

[Redundant cloud storage with a friend and a Raspberry Pi] Do you enjoy the many benefits of cloud services but do you also like to be in full control of your own data? Maybe you are worried about privacy or maybe you just want a little more flexibility. In my case I wanted to have..... Listed under: [Other Projects]

1440.

[Smartphone Garage Door Opener] I had an extra Raspberry Pi laying around from when I ordered two of them a few months ago. I used the first one for a media center and it runs XBMC flawlessly allowing me to watch downloaded movies on my television. I pretty much..... Listed under: [GPS Based Projects]

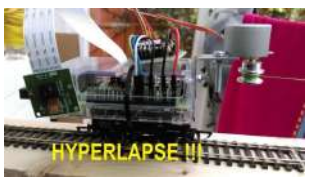
1441. [Coffee Table Pi] The purpose of this project is to create a modern slimline version of an arcade cocktail cabinet. Also to do other tasks such as browse web write emails with the use of a wireless keyboard and mouse. The 24 inch LCD screen mounted in..... Listed under: [Home Automation Projects]

1442.

[Raspberry Pi Playstation Mod](#) I've always been a gamer so but was more a C64 person back in the day so we never really had a console as a kid. I always loved popping around to friends and playing things such as Mario Kart as well as a host..... Listed under: [Game - Entertainment Projects](#)

1443.

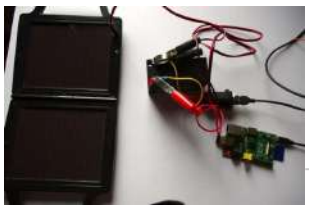
[Port a Raspberry Pi Project:](#) The eventual result of this instructable is, a portable (self powered) raspberry pi system to run field experiments. Part 1 Small inexpensive portable system that includes, Computer (RPI), Monitor with Audio speakers (Secondary screen from refurbished Auto DVD player $29 including the DVD player to be..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1444. 

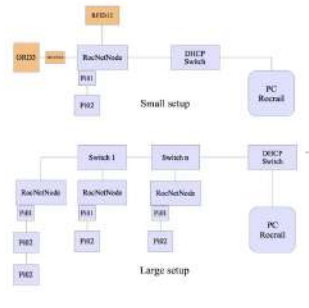
[Raspberry Pi moving timelapse](#) Step 1: Connect the Camera So to connect the camera is quite simple and there is a lot of help online. The official help video is here: https://www.raspberrypi.org/help/camera-module-set... but I found this to be more helpful http://thepihut.com/blogs/raspberry-pi-tutorials/1... once installed and you have enabled the camera..... Listed under: [Video - Camera - Imaging Projects](#)

1445.

[Read temperature with DS18B20 | Raspberry Pi 2](#) Hello! This is my first instructable project, so it won't be as professional as others! We are using DS18B20 temperature sensor to get the temperature of your room. Enjoy! Step 1: Supply You will need: The sensor itself DS18B20 http://www.ebay.com/itm/Waterproof-Digital-Thermal... Resistor (I'm using 4,7k Ohm)..... Listed under: [Temperature Measurement Projects](#)

1446. 

[Solar Powered Raspberry Pi](#) Step 1: What You need A raspberry pi A solar panel (with built in charger controller or a Solar Charging Regulator) A car power socket A usb car power adapter A battery and some wire Step 2: Connecting the Battery First off we need to connect the..... Listed under: [Solar energy projects](#)

1447. 

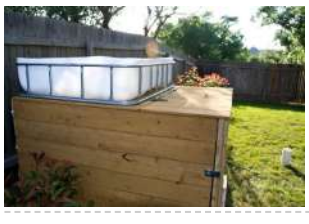
[Model Railway Automation with Raspberry Pi.](#) The popular and inexpensive Raspberry Pi1) tiny PC offers some interesting I/O like I2C and GPIO. Because the I2C bus is a common and standard one, the idea to use it for Model Railway automation was born in 2013. Together with Peter Giling, who lives..... Listed under: [Other Projects](#)

1448.

[DIY Home Security and Automation with Raspberry Pi 2](#) In this instructable I will detail my methods for creating a fully custom Home Security and Automation System. This is a work in progress, and as I will be adding to it as I go. For now I will provide a breakdown of the goals..... Listed under: [Security - Safety Projects](#)

1449.

[Raspberry Pi, Internet Radio](#) We have been aiming to do a mini hack for a while to bring some new life to an old radio and let us radio are favourite internet radio stations. Step 1: You Will Need... Depending on the radio you are going to install your..... Listed under: [Radio Projects](#), [Wireless projects](#)

1450. 

[Raspberry Pi Controlled Aquaponics](#) Aquaponics /ˈækwəˈpɒnɨks /, is a food production system that combines conventional aquaculture (raising aquatic animals such as snails, fish, crayfish or prawns in tanks) with hydroponics (cultivating plants in water) in a symbiotic environment. In normal aquaculture, excretions from the animals being raised can accumulate..... Listed under: [Temperature Measurement Projects](#)

1451.

[Introduction to controlling GPIO pins with Python](#) Setting up your Pi for GPIO programming You need to install a few things to get Python to talk to the GPIO pins and control them. If you're using the standard Raspian OS, it's an easy affair. Fire up your terminal if you're in the..... Listed under: [LED Projects](#)

1452. [WiFi – Access Point out of a Raspberry Pi (Repeater)](#) What do you need? A Raspberry Pi, model B. A boot SD card for the Raspberry Pi. A USB WiFi device that supports "Access Point" mode. An Ethernet cable to connect to the local network. How does it work? The Raspberry Pi is configured as..... Listed under: [Wifi / WLan Projects](#)

1453.

[Radio Caroline on the RaspberryPi] The Swinging 60's This is an appropriate label for the 1960's for 2 reasons: (1) it was a decade of great change, especially regarding popular music & fashion, (2) You have to now be in your 60's to have experienced it as a 1960's teenager..... Listed under: [Radio Projects]

1454.

[Play Music on Raspberry Pi Using XMMS2] Introduction I installed and trialled the following music/media players in my Raspberry Pi: rhythymbox - Crashed every time I clicked on a song audacious - Did not respond every time I clicked on a song mplayer - Worked as expected clementine - Did not respond..... Listed under: [Sound - Audio Projects]

1455.

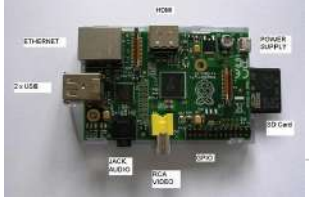
[Raspberry Pi Irrigation Controller] Gardening improves health and quality of life, connecting us to our local environment. Plus, you can eat organic fruits and veggies at very little cost. Yet for all these fantastic benefits, remembering to water can still take a backseat to our busy lives. Fortunately, home..... Listed under: [Home Automation Projects]

1456.

[Build your own Raspberry Pi Mini 3D printing monitor] While Adafruit's builders have built up a reputation for constructing very cool and original 3D printed toys, perhaps the most impressive of all their designs was the 3D printed Raspberry Pi Mini Computer, an actually working and customizable pc housed in a 3D printed structure..... Listed under: [LED Projects]

1457.

[Laser Harp with Tah and Raspberry-Pi] This valentines we made this wooden Harp and used Laser and Light Dependent Resistors (LDR's) to play music. I will not be showing you how to make the wooden structure, but you can find the images with exact dimensions if you want to use them..... Listed under: [How To - DIY - Projects], [Sound - Audio Projects]

1458. 

[Installing and Using Pidora OS on Raspberry Pi] WHAT IS RASPBERRY? Raspberry is a new (one year old), ultra small (credit card size) , and cheap (35USD), Linux computer. The CPU is an ARM processor at 700MHz with 256 Mb (type A) or 500Mb (typeB) of RAM. The flavors of Linux for Raspberry..... Listed under: [Development Board - Kits Projects]

1459.

[Turn a keyboard into a Raspberry Pi case for around $20 or less.] My first published instructable. I wanted to have a cover for my RPi, but didn't want to spend a lot to get one. I remember seeing one online and thought I could do something like this: http://www.howtogeek.com/121814/turning-a-keyboard-into-a-computer-with-raspberry-pi/ on the cheap. Sure, mine didn't turn out as..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1460.

[Raspberry Pi: Minecraft Server] These instructions will provide you with a list of requirements and steps for configuring your own Minecraft server using the Raspberry Pi. Once complete, you will be able to access and play with your friends from across the world on your Raspberry Pi. Step 1:..... Listed under: [Internet - Ethernet - LAN Projects]

1461.

[Raspberry PI and GPIO pin: Controlling an LED with Bash and Python] To this effect a LED, resistor 330 ohmnios, Wire, and protoboard, or tin and a soldering. Also need our Raspberry tenga yes Raspbian preinstalled, if not your case, you can see how to do it in the following link directory. Mounting the circuit You can..... Listed under: [LED Projects]

1462.

OBD-Pi Step 1: Hardware Required: Raspberry Pi Model B or B+ Aftermarket head unit (Note: Must support Auxiliary input) Plugable USB Bluetooth 4.0 Low Energy Micro Adapter 2A Car Supply / Switch or Micro USB Car Charger ELM327 Bluetooth Adapter or ELM327 USB Cable RCA cable..... Listed under: Bluetooth Projects

1463.

Robot Using Raspberry Pi & Bridge Shield The Bridge Shield is a board for students, hackers & researchers. You can use it along with a Pi or Arduino Uno to create cool DIY projects with ease. This will be an open source board and we are presently designing the second generation. We..... Listed under: Robotics - Automation Projects

1464.

Arduino & Raspberry Pi Camera Interface Yes,we learned that we can take mobile phone camera modules from almost all mobile phones to inteface them with our advanced hobby electronics projects just as with any other standard add-on modules. Since this calls for an appropriate microcontroller, it is better to use Arduino..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1465.

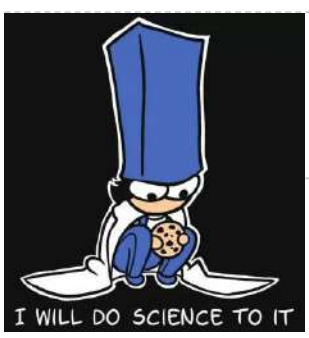
Mechanical Pi As part of the semester topic „Techno Legacy" David and I decided to focus on pocket calculators. These devices become more and more irrelevant due to the universal integration of their functionality into major digital devices, primarily smartphones. While doing some research on calculators and..... Listed under: Calculator Projects

1466.

Raspberry Pi Wi-Fi Media Server These instructions will provide you with a list of requirements and steps for configuring your own local Wi-Fi media server using the Raspberry Pi. Once complete, you will be able to plug a USB drive into your Raspberry Pi and provide the drive's content across..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1467.

Raspberry Pi to Go: How to Wire 18v Portable Pi Power The versatile system-on-a-chip Raspberry Pi board seems to have something for everyone: plenty of ports for display, sound, and USB peripherals; a pin header for relaying inputs and outputs from the physical world; and space for a dedicated camera module, which makes it great platform..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1468. 

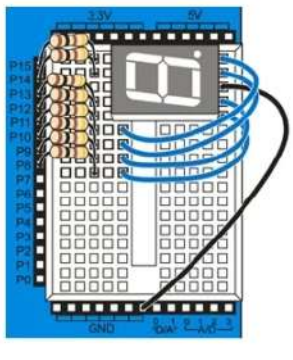
IBeacon Entry System with the Raspberry Pi and Azure In late March I went to a hackathon at Universal Studios. We created a system where guests could bypass the queue line by completing a series of tasks that would lead them around the land the ride is in where the average completion time was..... Listed under: Other Projects

1469.

DTRONIXS Mini PiIO Protoboard Hot on the heels of the PiFace, to add to my collection of Raspberry Pi interface boards comes the Mini PiIO Protoboard from DTRONIXS. Top photo is the base board sitting on a Raspberry Pi, the 2nd one is the board made up with a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1470.

Make animation from Openclipart's SVG with Raspberry Pi This is an Instructable which describes the process of making an animation from Openclipart's SVG. Openclipart library is a collection of 100% license-free art that you can use for any purpose. I will explain this Instructable for the Raspberry Pi user. If you are a..... Listed under: Other Projects

1471. 

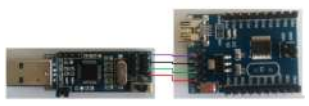
Seven-Segment Display A 7-segment display is a great way to display numbers using your Propeller. You can find these in many products that need to display numbers in a simple way, like clocks, kitchen appliances, or digital scales. This display uses seven LEDs arranged in a special..... Listed under: LED Projects

1472.

Installing RetroPie/EmulationStation onto Raspberry Pi 2 Model B+ (Playstation 1 Emulator Included!) Goal Installing RetroPie through Raspberry Pi's OS (Raspbian) and also enabling Playstation 1 Emulator in RetroPie. I'll also teach you how to write images on your Mac or Windows PC as well (no worries :D). This tutorial is for Raspberry Pi 2 B+ Models. Any..... Listed under: Other Projects

1473.
Control your old film camera with a Raspberry Pi Vintage Pi Recipe Using the techniques provided here, you can control a film SLR camera and a USB GPS receiver with a Raspberry Pi. Using Raspberry Pi to control motors, LEDs, digital cameras, and other sorts of modern peripherals is nothing new. However, you can..... Listed under: Video - Camera - Imaging Projects

1474.
Make a secret IR-camera security raspberry pi unit Did you ever wanted to know what's going on in your room, when you're not at home? Did you ever wanted to know who's entering your room and grubbing around in your things? Did you want to have a robot friend you can send messages..... Listed under: Video - Camera - Imaging Projects

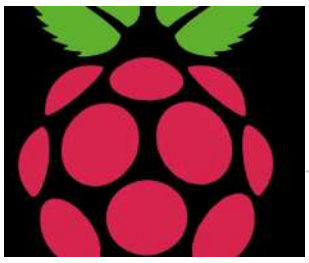
1475. 
ICStation STM8 Minimum System Board 1.Features 1.Control chip is STM8S003F3P6 2.All pins can be available,and mark pins,but male pins should be welded by customers in person(Customers should provide your own male pins) 3.Support SWIM debug mode 4.There be two power supply mode,USB MINI wire and 2.54 male pin 5.You can..... Listed under: Development Board - Kits Projects

1476.
All Weather Solar Powered Raspberry Pi Here I am going to show you how to set up a solar panel, buck convertors and batteries to create a solar power solution that will keep your pi powered 24/7. A great idea for your personal server or timelapse projects. The solar panel is..... Listed under: Solar energy projects

1477.
Red Heart-Shaped Flash LED DIY Kit 18pcs LEDs Description Red Heart-Shaped Flash LED DIY Kit 18pcs LEDs Circuit board with 1.5mm high-quality all-glass plate processing technology, the pad large, thick wire, fly line rarely (only 3), component layout and beautiful, copper surface using environmentally friendly antioxidant treatment. Using 9 SMD components, easy welding..... Listed under: How To - DIY - Projects

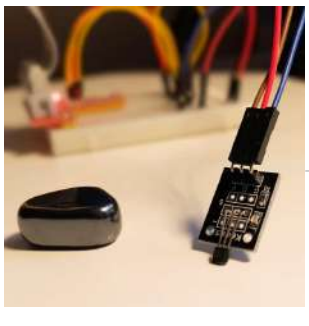
1478.
Raspberry Pi Sega Mega Drive/Genesis II Case I received my Raspberry Pi and decided I needed a case. I didn't have much available to me in terms of laser cutters, 3D printers or woodwork skills etc. so I thought laterally. I'd previously had the idea of using the Pi as an emulator so I thought,..... Listed under: Other Projects

1479.
How to Send a Temperature Emergency SMS Using Tracking Kit (GPRS + GPS) Contents Introduction Step 1: Connection Step 2: The code Links and Documentation 1. Introduction Go to index This tutorial allows the user to measure the temperature of an object. When the temperature is 0ºC or less, a text message is sent to a mobile phone..... Listed under: GPS Based Projects

1480. 
Reduce overhead due to network drive on Raspberry Pi Problem We add a line entry to /etc/fstab when Raspberry Pi needs to automatically mount a network drive. The problem with this approach is that: Raspberry Pi needs to mount the network drive from the point of when booting up to shutting down. In other..... Listed under: Raspberry Programmer Projects

1481.
Make An Auto-Locking Office Door with Smartphone Proximity Sensor Pssst – want some high tech protection for your home office, or a secret lock for your “workshop” (ok, you got me, it’s actually a dungeon/gaming room) that the kids won’t be able to figure out? We’ve got you covered. Let’s build a DIY smart lock that..... Listed under: Sensor - Transducer - Detector Projects

1482.
Weather station based on Raspberry Pi This is a simple project for a weather station. Initially it reads temperature, pressure and humidity. Next step is to measure wind direction and after that wind speed. The base of the project is a Raspberry PI A+ which was chosen by its small consumption,..... Listed under: Temperature Measurement Projects

1483. 
Raspberry Pi digital Hall sensor in JAVA All right this is the review on the next two lessons on linear hall sensors. Lesson 02 uses an analog linear hall sensor and an analog to digital conver IC ADC0832. The lesson 03 uses a linear hall sensor with added comparator, which allows some..... Listed under: Sensor - Transducer - Detector Projects

1484. How to Repair a Broken Raspberry Pi SD Card Slot It's pretty easy to break the SD card slot on a Raspberry Pi (I broke mine by dropping it on the SD card). If you break yours, there's no need to cry over spilled Pi. Replace the disappointing SD card slot with a new one..... Listed under: Interfacing(USB - RS232 - I^ ISP) Projects

1485.

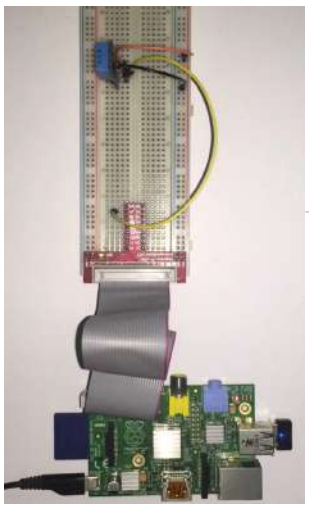
[Easy DIY baby crying detector with Raspberry Pi](#) In this instructable we will learn how to make a simple yet effective baby monitor that detects and alerts you whenever the baby is crying. We used Philips Hue as an alert system but you can choose a different item or channel to get notified..... Listed under: [Sensor - Transducer - Detector Projects](#)

1486.

[Raspberry Pi world web cam](#) Concept: The broadband Internet that you use in your house for 24*7 might be costing you around $9 to $35 per month , add another $150 (one time) to it and you have your own home surveillance system which will monitor your home 24*7..... Listed under: [Video - Camera - Imaging Projects](#)

1487.

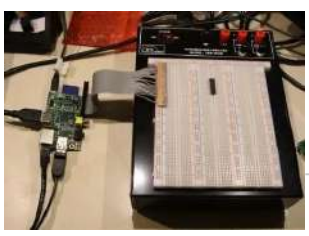
[How to make a Raspberry Pi Arcade with no programming](#) Setting up a Raspberry Pi arcade is actually really easy, thanks to a Linux distribution called RetroPie. You don't need to do any programming or setup, just install the image on an SD card. This will allow you to use the arcade with a keyboard..... Listed under: [Game - Entertainment Projects](#)

1488. 

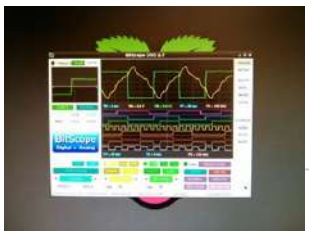
[Home (Room) Temprature and Humidity Monitor with Web Based Chart – Raspberry Pi](#) Simple way to monitor your, Home ,room, garage small factory or any other places Temperature and Humidity from anywhere in the world via internet. It very fun and very simple. Step 1: The Concept The Raspberry Pi will get the Home(Room) Temperature and the Humidity..... Listed under: [Temperature Measurement Projects](#)

1489.

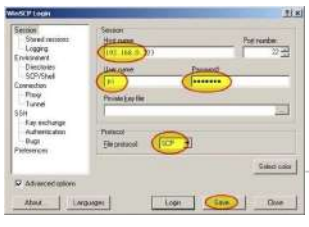
[GPS Module for Arduino and Raspberry Pi](#) Introduction Ingredients: 1 x GPS module 1 x Antenna 1 x Arduino Uno or 1 x Starter Kit for Raspberry Pi + Raspberry Pi 1 x Two small wires (Red an Black) 1 x PC Preparation Time: The GPS module for Arduino and Raspbery Pi..... Listed under: [GPS Based Projects](#)

1490. 

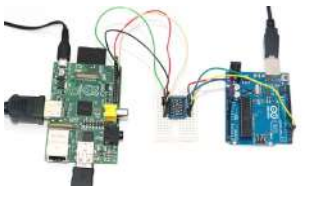
[Raspberry Pi GPIO Expansion Cable from a Used IDE Cable](#) Rev B of the raspberry Pi ships with a 26 pin GPIO port and my first dilemma after bringing up my Pi was, how was I going to break out the PI's GPIO pins so that I could easily access them for design work? I..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1491. 

[Breadboard One | A typical Mixed Signal Circuit.](#) We designed Breadboard One as the first BitScope Ed project because it's a simple mixed signal circuit which explains the key elements of modern mixed signal systems. A Mixed Signal Circuit is one which has both analog and digital components. In analog circuits the currents..... Listed under: [Development Board - Kits Projects](#)

1492. 

[Setup a Raspberry Pi PHP web server](#) Lighttpd is a lightweight web server, with all the essential functions of a web server, PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. This is a tutorial on how to install Lighttpd and PHP on..... Listed under: [Internet - Ethernet - LAN Projects](#)

1493. 

[Raspberry Pi and Arduino Connected Over Serial GPIO](#) Raspberry Pi Serial GPIO Configuration 0. if you have not seen my article on how to remote access your Raspberry Pi, take a look here: http://blog.oscarliang.net/setup-raspberry-pi-for-remote-access/ 1. In order to use the Raspberry Pi's serial port, we need to disable getty (the program that displays..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

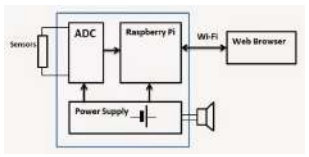
1494. [Raspberry Pi based wall avoiding robot – FabLab NerveCentre](#) Please note: This instructable is not complete - but may be helpful Published to allow the excellent people at Derry's NerveCentre to take the code out to schools I hope to get back to this but my current job is keeping me from it for..... Listed under: [Robotics - Automation Projects](#)

1495.

[Power over Ethernet for Raspberry Pi](#) I recently purchased a Cisco Catalyst 3560 48 port PoE Switch and soon realized that I didn't need 48 ports. I soon started thinking of ways of using that power for other needs like charging phones or running devices. It then hit me that I..... Listed under: [Internet - Ethernet - LAN Projects](#)

1496.

[Raspberry pi Kodi network media player for less than $60!](#) Kodi (also known as XBMC) is a great network media player that can access not just the files on your USB and network, but great internet content such as Youtube, Syfy, HGTV and more. Kodi is a piece of software that you can download and..... Listed under: [Sound - Audio Projects](#)

1497. 

[Multichannel Professional Data Logger on Raspberry Pi – Part 1](#) See the Part 2 for the hardware and Part 3 for the software implementation. In this series of articles I'll explain how to build a multichannel Data Logger, capable of collecting voltage, current and temperature measurements over the specified intervals of time. Our alternate goal..... Listed under: [Temperature Measurement Projects](#)

1498.

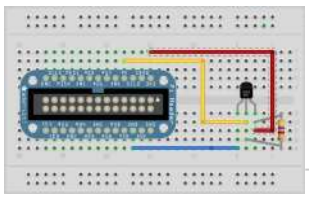
[USB relay module for Windows, Linux, Raspberry Pi](#) USB is a very well documentated and reliable interface. Nearly every computer system today is equipped with one or more USB host connectors. Sometimes you need some inputs and outputs for tasks surrounding your PC or you have a cool idea for an automation with..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1499.

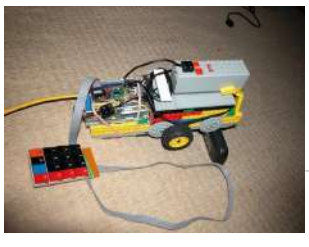
[Back-of-Monitor Raspberry Pi Mount](#) As Raspberry Pi computers begin to appear all over the world, people start wondering what to do with them. The first thing I wondered (after I got it up and running) was "how the heck am I going to get this mess of cables off..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1500.

[Remote control with Raspberry Pi and Phidget WebService](#) Enable your Raspberry to control relay, led, sensor and digital input remotely with Phidget WebService. "The Phidget WebService is a background process that broadcasts all events and data from a USB Phidget over the network: It uses link local addressing which allows you to use..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1501. 

[Temperature Monitoring on the Raspberry Pi](#) Overview The Raspberry Pi is a small single-board computer (SBC) developed here in the UK, by Raspberry Pi Foundation. It runs various versions of linux on ARM and has a set of I/O pins which you can use to attach external components such as sensors,..... Listed under: [Temperature Measurement Projects](#)

1502. 

[Adafruit Protoplate for the Rasbperry Pi](#) As part of my Big Trak refurbishment (not going as well as I wanted it to), I decided to use the Adafruit Prototyping Pi Plate to mount the additional electronics on. If you're not familiar with it, then this is it: So it's a double-sided..... Listed under: [LED Projects](#)

1503. [MAME gaming table with Raspberry Pi](#) Inspired by similar projects online, I've been working with a neighbour to build a pair of coffee-table MAME-based retro gaming tables. The more compact one is mine; the larger with two sets of controls is his. Photos ofboth are used in this instructable. These use..... Listed under: [Game - Entertainment Projects](#)

1504.

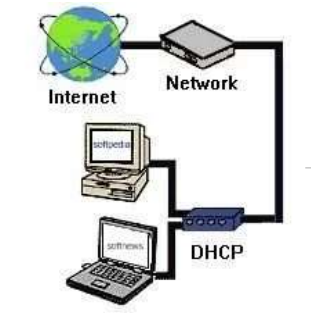
[Driving the Max7219 with the Raspberry Pi](#) The max7219 lets us control lots and lots of LEDs using just a few Raspberry Pi pin-outs. No hassles with multiplexing, latching, refreshing or using up all your outputs – it handles everything for us. We just send commands to the max7219 and we can..... Listed under: [LED Projects](#)

1505.

[An elegant, stacking, Real Time Clock for Raspberry Pi](#) If you want to build a good Real Time Clock for your Raspberry here's the tutorial you were looking for! This is a revised and simplified version for Instructables made out of this article at my personal blog. Difference is mainly in the structure and..... Listed under: [Clock - Timer Projects](#)

1506.

[How to connect a Raspberry Pi to a Wi-Fi network](#) So you want to connect a Raspberry Pi to the internet, but your computer lacks an ethernet connection, or you lack an ethernet cable. What to do? What you need: Raspberry Pi microSD card HDMI cable USB power adapter (that can provide at least 600mA..... Listed under: [Wireless projects](#)

1507. 

[Raspberry Pi as a 3g (Huawei E303) wireless (Edimax EW-7811Un) router](#) Aim: Set up the Raspberry Pi as a wireless router using the Raspbian OS. The internet connection will be provided by a Huawei E303 USB 3g dongle on the safaricom network in Kenya, though the setup should be similar on most Huawei dongles and 3g..... Listed under: [Wireless projects](#)

1508.

[A Mobile Robot with Vision Based Obstacle Avoidance](#) Abstract: The purpose of this report is to discuss and demonstrate the concept of designing and implementing a mobile robot capable of visually detecting and avoiding obstacles using a USB webcam. The system was ported to the Raspberry Pi hardware, a Linux based US$35 computer.This..... Listed under: [Phone Projects](#), [Robotics - Automation Projects](#)

1509.

[GPIO for Raspberry Pi B, B+, Pi 2 running PROTA Pi OS (HTML5)](#) Some of us believe greater can be fulfilled when technology upbuilds and completes the great, prior products of our efforts. It's the basic fundamentals how all of us evolved. GPIO I've experienced is in a way a shortcut that trims down to the simple core..... Listed under: [Wireless projects](#)

1510.

[Pan / Tilt face tracking with the raspberry pi](#) With some effort I have found that controlling two servo motors to allow a webcam to pan/tilt while tracking a face in real time using the raspberry pi not as impossible as it may at first seem. With some careful tweaking and code optimization I was..... Listed under: [Sensor - Transducer - Detector Projects](#)

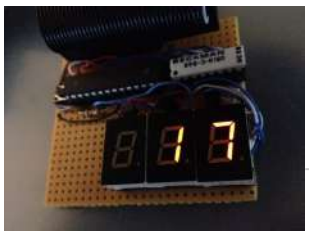
1511.

[Lightning! The Lightning Detector for Raspberry Pi Weather Station](#) In this Instructable you will learn: How to a connect a Lightning Detector to a Solar Powered Weather Station How to design and position the lightning detector for best perfomance How to gather data to see the Lightning story as it happens How to wire..... Listed under: [Solar energy projects](#)

1512. [Raspberry PI case with built in surface mount for less than $2](#) I own two RPI's one is a media server for my prerecorded TV shows; the other is hooked up to a Motorola Lapdock to run experiments and for educational purposes. I am an engineer who volunteers for the Boy Scouts of America I teach computers..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1513.

[Raspberry Pi based Solar Street Light](#) PROJECT DESCRIPTION The project is designed for LED based street lights with auto intensity control using solar power from photovoltaic cells interfaced to a Raspberry Pi board. As awareness for solar energy is increasing, more and more individuals and institutions are opting for solar energy..... Listed under: [Solar energy projects](#)

1514. 

[Raspberry Pi 2 DIY LED LAN device counter](#) Do you know how many devices are on your local network? That is what we where wondering at our hackerspace HackBergen. Yes, there are available programs and Apps to scan your network, but we can also scan with the Raspberry Pi (RPi) and show the..... Listed under: [LED Projects](#)

1515.

["Portable" Raspberry Pi](#) Merry Christmas world!!! This is a special Christmas 'ible that I'm making based off what I got for Christmas this year. 😀 I got a small monitor and small keyboard this year (AA battery for size comparison), and I decided to use it to make..... Listed under: [LCD Projects](#)

1516.

[Raspberry Pi – Wireless Projector](#) Have you ever wanted to walk around the room with your laptop, not tethered to a projector, and still project? This Instructable will show you how to make a Raspberry Pi powered Wireless Projector. What You Need: Raspberry Pi Model B or B+ (I used..... Listed under: [Wireless projects](#)

1517.

[How to connect Raspberry Pi UART to a computer](#) Significance of UART in embedded Linux development Linux porting is a difficult task. We can't simply boot a Linux board by building u-boot, kernel, and root file system images. This type of approach never works. It will end up with several issues like kernel panics,..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1518.

[Using a USB external hard drive with your Raspberry Pi](#) Experimental introduction: In many cases SD capacity is not enough. Luckily Raspberry Pi can easily be connected to external USB hard drives. Follow the steps in this section, and you will soon have a lot more storage connected to your Raspberry Pi. Step 1: Experimental..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1519.

[A Raspberry Pi Controlled Two Faced Clock](#) This instructable shows how to use a 'Simple but Strong Plastic Box', (http://www.instructables.com/id/A-Simple-but-Strong-Plastic-Box/) from my previous Instructable, to make a Two Faced Clock which uses a Raspberry Pi to control two stepper motors. I'll not explain how to make the box itself, but will show..... Listed under: [Clock - Timer Projects](#)

1520.

[GPS and the Raspberry Pi](#) This example will show how to use the Dexter Industries GPS shield with the Raspberry Pi using the Arduberry. Step 1: Hardware Required 1.Raspberry Pi 2.Arduberry 3.Dexter Industries GPS Shield Step 2: Connection the shield Slide on the Dexter Industries GPS shield on the Arduberry..... Listed under: [GPS Based Projects](#)

1521.

[Control a Lionel Train with a Raspberry Pi](#) What happens when you take an old Lionel model train system and add some web-control? This project controls a Lionel model train set with the Raspberry Pi. In this project, we go step by step through the parts, hardware, and software to control a Lionel..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1522.

[Sizing a wind turbine to power your Raspberry Pi](#) This Is Your Pi on Wind Got a special project for your Raspberry Pi that requires it to operate off the electrical grid? If solar power doesn't provide enough juice, add some wind to the mix with an inexpensive wind turbine. Project Curacao is a..... Listed under: [Radio Projects](#)

1523.

[How To Assign A Static IP to The Raspberry Pi] Normally when devices connect to the network they are assigned IP address by the router which does so sequentially (in the order of devices being connected) or randomly. The same goes with your Raspberry Pi. But if you wish to use your Pi without a..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1524.

[Raspberry Kodi Streaming Speaker] My dad liked to buy a high end steaming speaker. But he found no wifi speaker with the ability to play music from an usb stick and listen music with the headphone. The most speaker we found had no display but I think it's nice..... Listed under: [Sound - Audio Projects]

1525.

[Raspberry Pi – single board Linux computer] I have been working with the Raspberry Pi for a few months and have had a great time experimenting.I plan on documenting some of the things that I have been able to do and observations that I have made. My latest project is to use..... Listed under: [Development Board - Kits Projects]

1526.

[Cheap solderless reset button for Raspberry Pi] This is my first Raspberry Pi. I've bought it as an XBMC home-theater box (and a "we'll see later on what else"). One of the annoying things I've found out right away was that it didn't have a reset button. You can politely shut down..... Listed under: [Other Projects]

1527.

[Make any Dumb TV a Smart TV] Do you wish your standard television could connect to the internet? You would have the ability to stream Netflix, Hulu, or look up anything on Google when your cell phone is out of reach. All of your music and movie files could automatically be linked..... Listed under: [LCD Projects]

1528.

[Electronic Circuit Designing: Multitasking with Circuits (Part 4)] Step: 8) Find reusable modules from the circuit diagram Whenever we do hardware designing, the first rule is to make it in modules that can be reusable. The modules that we make for this particular project may come useful in another project and hence..... Listed under: [Development Board - Kits Projects]

1529.

[DIY Home Security + Automation using a Raspberry Pi] This instructable should help you set up a DIY home security + automation system that uses 433Mhz door/window sensors, 433 MHz PIR motion sensors and webcams to monitor your home and 433MHz outlets to control lights etc. The original project was completed in phases and..... Listed under: [Development Board - Kits Projects]

1530.

[Create a video player with Dolby Digital/DTS output] You have an older home theater receiver with an S/PDIF input (optical or RCA) and want to play movies with DTS or Dolby Digital soundtracks? This guide shows how you can get 5.1 sound output from a Raspberry Pi even if your AV receiver does..... Listed under: [Video - Camera - Imaging Projects]

1531.

[Raspberry Pi Motion Sensitive Camera] Using a Raspberry Pi, a Raspberry Pi camera module, a PIR motion sensor, a USB WiFi adapter, a handful of parts, and a couple of Python programs, you can construct a camera that will automatically snap photos or record short videos when something moves in..... Listed under: [Video - Camera - Imaging Projects]

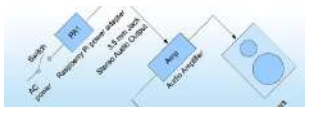
1532.

[Turning your Raspberry Pi into a personal web server] LAMP is an acronym that stands for LinuxApacheMySQLPHP and are components required to run a Dynamic HTML webpage. This instructable will demonstrate how you can turn your Raspberry Pi into a personal web server. The steps to install all of the components are relatively straight..... Listed under: [Other Projects]

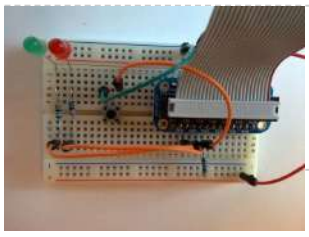
1533.

[Raspberry Pi Temperature and Light Sensor] Design Required 2 x DS18B20, 2 x 4.7k resistor The DS18B20 is a rather useful sensor because you can read more than one of them using the same GPIO pin. The Raspberry Pi is able to recognise the input from each separate sensor. This system..... Listed under: [Sensor - Transducer - Detector Projects]

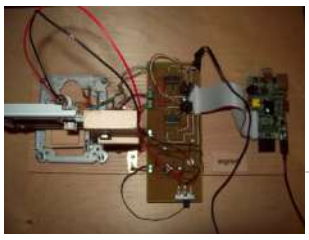
1534. [Dual Project: AirPlay-Pi and new life for an old radio] Hey, Welcome to my first ever post on Instructables! The Project you're about to read over is setting up a Raspberry Pi to use 'AirPlay' and how I used it, which clashes with the second part, the new life for my old radio. Step 1:..... Listed under: [Radio Projects]

1535. 

[Raspberry Pi Internet Radio / Music Player](#) Introduction In the March 2012 issue of Nuts and Volts I wrote an article entitled "Build Your Own Wifi Internet Radio" about how to build an Internet radio using a repurposed wireless router. While this project worked fine (and still does) it had limitations driven..... Listed under: [Internet - Ethernet - LAN Projects](#)

1536. 

[Detecting a button press through GPIO using Raspberry pi](#) If you want to build electronic devices, at some point you're going to need to read data through GPIO. In this exercise, we're going to read the value of a push button on a breadboard. Set up the circuit as shown in the pictures on..... Listed under: [Sensor - Transducer - Detector Projects](#)

1537. 

[engravR: Build a Pi-Powered Laser Engraver using Raspberry pi,](#) engravR is a Raspberry Pi-powered laser engraver built primarily from two old DVD-RW drives. The idea of using DVD drives to make a laser engraver is not particularly new, but most systems use an Arduino and external stepper drivers. The advantage of using the Pi..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

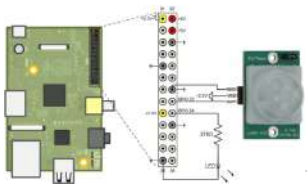
1538. [GSM Remote Control – GSM Module Raspberry Pi,](#) This GSM Mobile is used for our Remote Control (for example Gate Control, Temperature Control....). We use the word 'module' because, unlike what we did in our remote control projects, this time around the mobile phone is not mounted on a printed board, but rather on..... Listed under: [GPS Based Projects](#)

1539.

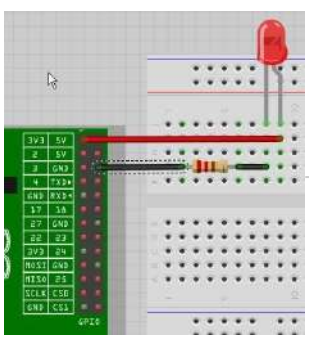
[Raspberry Pi – Stepper Motor Control & Breakout Board](#) Overview Many of the previous Raspberry Pi projects I had been working on were based on fairly simple GPIO logic to turn things on and off. Today I wanted a little more of a challenge so I started working to control a stepper motor from..... Listed under: [Motor Projects](#)

1540.

[LCD Library (HD44780U)](#) The wiringPi LCD devLib allows you to drive most of the popular 1, 2 and 4-line LCD displays that are based on the Hitachi HD44780U or compatible controllers. It allows you to connect multiple displays to a single Raspberry Pi. The displays can be connected..... Listed under: [LCD Projects](#)

1541. 

[Motion Sensor using Raspberry Pi](#) This example shows how to use Raspberry Pi® hardware to interface to a motion sensor and control an external LED. Introduction Raspberry Pi target enables you to create and run Simulink® models on Raspberry Pi hardware. The target includes a library of Simulink blocks for..... Listed under: [Sensor - Transducer - Detector Projects](#)

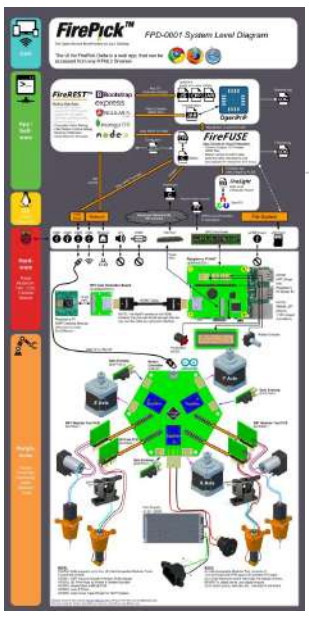
1542. 

[How to Connect an LED to your Raspberry Pi](#) The easiest way to turn on an LED using the Raspberry Pi is to wire it up to the +3.3v or +5v pins of the General Purpose Input Output (GPIO) header and ground (0v), making sure to place a resistor in series with the LED..... Listed under: [LED Projects](#)

1543. [Analog Gauges Using I²C on the Raspberry Pi](#) I've been intending to try driving Switec X25.168 motors using the MCP23008 I²C I/O port expander chip from an Arduino, but it occurs to me that it might be more interesting to try this on a Rasberry Pi. If it works, it will demonstrate a..... Listed under: [Clock - Timer Projects](#)

1544.

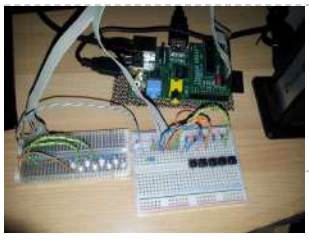
A Slice of Raspberry Pi Adding an Envelope Detector to convert an RF input to a DC output I connected the ADC Pi module to the GPIO header and stacked the DDS module on top. PCB support spacers were used to hold the modules together and to take the strain..... Listed under: Sensor - Transducer - Detector Projects

1545. 

A project log for FirePick Delta, the Open Source MicroFactory Software Topology and Theory of Operation OpenPnP is the high-level brains of the machine, that does the seemingly-simple stuff like "pick up that part" and "put it over there". Lots of libraries and sub-systems feed information to it, and it passes information to the various..... Listed under: Sensor - Transducer - Detector Projects

1546.

An introduction to GPIO and physical computing on the Raspberry Pi One powerful feature of the Raspberry Pi is the row of GPIO (general purpose input/output) pins along the edge of the board, next to the yellow video out socket. These pins are a physical interface between the Pi and the outside world. At the simplest..... Listed under: LED Projects

1547. 

Raspberry Pi Shutdown Circuit with Sleep mode Raspberry Pi is a great platform to be used in a robot project, but it has a severe limitation: by default it does not have a built-in power button. As a Linux-based system Raspberry Pi requires to be shut down gracefully before switchin off power..... Listed under: Robotics - Automation Projects

1548.

Portable Raspberry pi with battery pack 2.0 This was my second project I have worked on for Instructables. I think I did a great job and I hope you do too. For this project you will need: Where I got them: -Raspberry pie (with a case if possible) ..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1549.

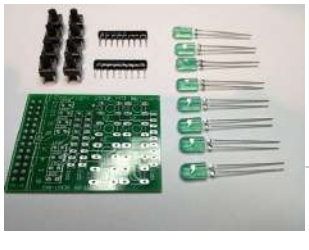
Raspberry Pi with the IO Expander A month ago my Raspberry Pi arrived and since then I have been wanting to control external devices with it. Like any other newbie, I was eager to do something with it as soon as possible and spent hours and hours reading and trying out..... Listed under: LED Projects

1550.

Internet of Things Toilet Uploads Events to the Cloud (Raspberry PI) Internet of Things Toilet uploads flush events and toilet paper roll change out events to Google Drive spreadsheet. How does it work? – An aquarium liquid level sensor float switch detects toilet tank level; flushing lowers the level closing the switch. A photo cell located..... Listed under: Internet - Ethernet - LAN Projects

1551.

Raspberry Pi Twitter Monitor The Twitterverse Like it or not, Twitter is a force to be reckoned with. Millions of people use Twitter to talk about general happenings in the world and their lives. Large events like conventions, elections, and uprisings have a habit of crashing the Twitter servers..... Listed under: Internet - Ethernet - LAN Projects

1552. 

Raspberry Pi – John Jay's 8 LED & Button Breakout Board Overview In a previous article I demonstrated how to build your own Raspberry Pi GPIO testing board that included buttons, slide switches, and LEDs. Since that time, I learned about a retired engineer in Georgia named John Jay who is producing awesome little companion electronic boards..... Listed under: LED Projects

1553. RPi 5V PSU construction using Raspberry pi A 5V power supply for the Raspberry Pi - Construction How To Due to various problems with the power supply for the RaspberryPi, a home made PSU might be a solution for some of you. You will need some experience with construction of electronic circuits,..... Listed under: Battery Projects

1554.

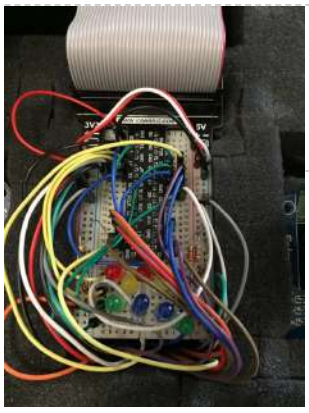
[Measuring temperature with RASPBERRY PI](#) One of the main characteristics of the environment in which we live is the temperature and therefore its measurement is quite important. The easiest way to measure it is by using Maxim integrated 1-Wire sensors. This way you can connect up to 10 sensor to..... Listed under: [Temperature Measurement Projects](#)

1555.

[TFT LCD display with 320×240 resolution for RASPBERRY PI](#) RASPBERRY PI is credit card size computer, which price is only about 35Euro. This makes it accessible to a wide range of people. Despite its low price it is equipped with Broadcom's SoC BCM2835, it contains very powerful ARM1176JZFS CPU running at 700MHz, with floating..... Listed under: [LCD Projects](#)

1556.

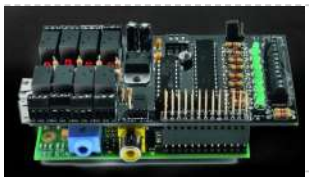
[List of required material using raspberry pi](#) Raspberry Pi 8GB SDHC Class 10 Card Nano Wifi-Stick Flytron Navigatron I2C GPS 4-channel I2Csafe Bidirectional Logic Level Converter ADS1015 ADC Suppo A2212/13 1000KV Brushless Motor 10"x4.5 GF Propeller Set Orange 4 Stück 2 CW 2 CCW Flyduino HEXFET 20A Motor Controller Drotek IMU 10DOF:..... Listed under: [Game - Entertainment Projects](#)

1557. 

[Control home devices with Bluemix Internet of Things (Part 2)](#) Part 2: Configuring the Raspberry Pi This is a continuation of Part 1 of Controlling home devices with Bluemix Internet Of Things If you haven't read Part 1, please do that first... In Part 1 we got the electrical work out of the way. We..... Listed under: [Home Automation Projects](#)

1558.

[Build your own internet radio](#) This Instructables shows you how to build an internet radio (listen to jazz, house music, rock, salsa...) in less than 30 minutes without any technical knowledge nor soldering. The radio uses a raspberry Pi as hardware, a ready to flash file to write a SDCard..... Listed under: [Internet - Ethernet - LAN Projects](#)

1559. 

[A Great I/O expansion Shield for RaspberryPi based on I2C](#) Today we introduce a I/O expansion shield for Raspberry Pi which allows you to extend the number of digital inputs and outputs available for our applications. [See also our previous I/O expander for Arduino] After having published the LCD display and GSM expansion shield we..... Listed under: [LCD Projects](#)

1560.

[Trigger a Webcam with a button and Raspberry Pi](#) This instructable will show how to trigger a webcam using Raspberry and a push button. A bash script run at startup and it launch a Python script that survey the GPIO port. When the button is pressed, a "fswebcam" command runs. Step 1: Materials -..... Listed under: [Video - Camera - Imaging Projects](#)

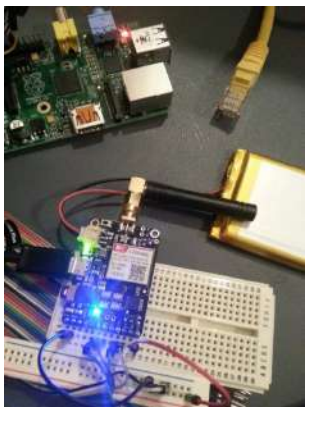
1561.

[Adafruit Ultimate GPS on the Raspberry Pi](#) How easy is it to get your Raspberry Pi eavesdropping on satellites 20,000 km up in the sky? Wonderfully easy thanks to Linux, and affordable thanks to Adafruit's Ultimate GPS Breakout! This quick learning guide will show you everything you need to do to add..... Listed under: [GPS Based Projects](#)

1562.

[Adafruit FONA using raspberry pi,](#) Ring, Ring! Who's that callin'? It's your breadboard! Introducing Adafruit FONA MiniGSM, an adorable all-in-one cellular phone module that lets you add voice, text, SMS and data to your project in an adorable little package. This module measure only 1.75"x1.25" but packs a surprising amount..... Listed under: [Phone Projects](#)

1563. [Network Interface Failover using FONA](#) Do you hate it when the internet goes down in your area? Do you want to be notified when your internet goes down when you are away from home? Do you have a project that needs 100% internet availability where you would need to be notified..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

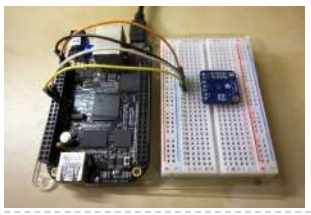


1564.

[Raspberry Pi orchestration](#) In this Instructable I would like to share my personal work-flow for working with headless Raspberry Pi. If you are interested in automating the setup and deployment process for one Pi or many this is the post for you. All the code is available on..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1565.

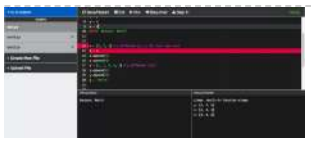
[Web Enabled PIXEL on Raspberry Pi](#) The PIXEL kit from LED:ART consists of an RGB LED matrix, a IOIO Mint Bluetooth microcontroller to drive the matix, and some software to give instructions to the IOIO for what to display. Originally, only an Android and PC based software was available. Now, web..... Listed under: [Internet - Ethernet - LAN Projects](#)

1566. 

[TMP006 Temperature Sensor Python Library using Raspberry pi,](#) Are you looking for an easy way to measure the temperature of something without having to attach a sensor directly to it? Consider using a non-contact temperature sensor like the TMP006! This sensor reads the infra-red radiation, or heat, emitted from an object and can..... Listed under: [Sensor - Transducer - Detector Projects](#), [Temperature Measurement Projects](#)

1567.

[Running OpenGL-based Games & Emulators on Adafruit PiTFT Displays using Raspberry pi](#) The Ideal: Adafruit's PiTFT displays are razor sharp. Whereas small composite screens on the Raspberry Pi usually require some video scaling (resulting in blurriness), PiTFT uses the GPIO header, digitally controlled pixel-by-pixel for a rock steady image. Though not a lot of pixels, it works..... Listed under: [Game - Entertainment Projects](#), [LCD Projects](#)

1568. 

[Debugging with the Raspberry Pi WebIDE](#) The Raspberry Pi WebIDE includes an advanced, yet easy to use tool, to help you work through code that you've downloaded or written in Python. If you haven't used a debugger, either on the command line or in an Integrated Development Environment (IDE), hopefully this guide..... Listed under: [LED Projects](#)

1569.

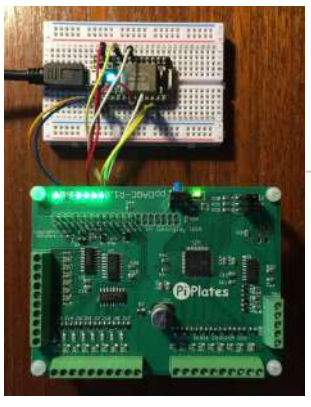
[Adafruit PowerBoost 500 + Charger](#) PowerBoost 500C is the perfect power supply for your portable project! With a built-in battery charger circuit, you'll be able to keep your project running even while recharging the battery! This little DC/DC boost converter module can be powered by any 3.7V LiIon/LiPoly battery, and..... Listed under: [Battery Projects](#)

1570.

[SSD1306 OLED Displays with Raspberry Pi and BeagleBone Black](#) Are you looking for a bright graphical display to use with you Raspberry Pi or BeagleBone Black project? Consider using one of the SSD1306-based OLED displays, with the SSD1306 Python library! Although they're small (only an inch or so in size), these displays produce a..... Listed under: [LCD Projects](#)

1571.

[How To Setup A Web Server On Your Raspberry Pi](#) This page aims to summarise the steps required to install a webserver with PHP support onto your Raspberry Pi. This will allow the Pi to server HTML and PHP pages to users on the same network. This is a useful mechanism to view images and/or..... Listed under: [Internet - Ethernet - LAN Projects](#), [News & Updates](#)

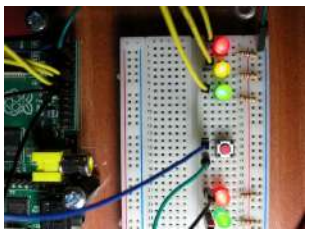
1572. 

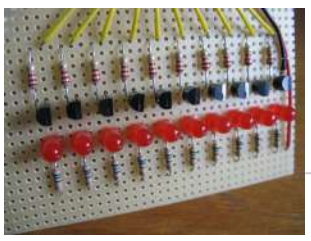
[Control Pi-Plate with Spark Core](#) The ppDAQC board from Pi-Plates.com is an inexpensive yet powerful solution for expanding the input/output capabilities of the Spark Core. And since Pi-Plates are stackable, it is a simple task to scale up the I/O capabilities of a single Core. All that is required for..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1573.

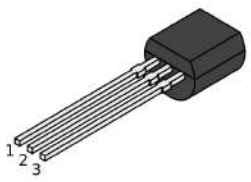
[Invisible dog trainer](#) With a pressure sensor, led and speaker you can turn your Pi into an invisible dog trainer that trains your dog to get off the couch. When the dog sits on the couch, the led blinks and the dog receives the command "Get off the..... Listed under: [Sensor - Transducer - Detector Projects](#)

1574. [3: More LEDs and a Button](#) So we now have a traffic light/pelican (Tux!) crossing simulator. The 2nd Red LED is connected to wiringPi pin 3, (GPIO-22), and the 2nd Green LED is connected to wiringPi pin 4, (GPIO-23). Test them as before with the gpio command, e.g. for i in..... Listed under: [LED Projects](#)

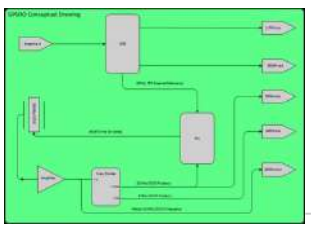


1575. 

[Knight Rider & Cylon Lights for the Raspberry Pi](#) The most obvious application for a Raspberry Pi is re-creating the sliding red lights found on “KITT” from Knight Rider or the Cylons in Battestar Galactica. This can all be done with pure electronics but that doesn’t involve any programming and therefore isn’t as cool……. Listed under: [LED Projects](#)

1576. 

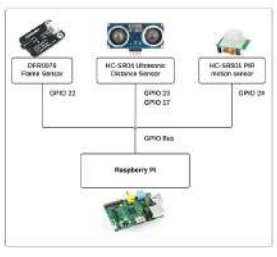
[Raspberry Pi 1- Wire Digital Thermometer Sensor (DS18B20)](#) While searching for a simple way to measure temperature using my Raspberry Pi I came across the DS18B20 1-wire digital temperature sensor. This promised an accurate way of measuring temperature with a few wires and almost no external components. The device only cost a few pounds…… Listed under: [Sensor - Transducer - Detector Projects](#)

1577. 

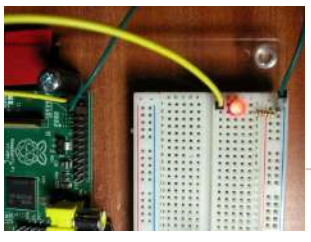
[My GPS disciplined Rubidium OCXO Frequency Standard and NTP server project](#) Part 1 he Doctor: People assume that time is a strict progression of cause to effect, butactually from a non-linear, non-subjective viewpoint—it’s more like a big ball of wibbly wobbly… timey-wimey… stuff. Amy Pond: It’s spacey-wacey, isn’t it? —Dr. Who? Though delightfully silly, there is…… Listed under: [GPS Based Projects](#)

1578.

[Drive a 16×2 LCD with the Raspberry Pi](#) Overview Adding a LCD to any project immediately kicks it up a notch. This tutorial explains how to connect a inexpensive HDD44780 compatible LCD to the raspberry pi using 6 GPIOs. While there are other ways to connect using I2C or the UART this is…… Listed under: [LCD Projects](#)

1579. 

[Java ME 8 + Raspberry Pi + Sensors = IoT World (Part 1)](#) Learn how to connect sensors to the Raspberry Pi and control them with Java. Published September 2014 The latest release of Java ME 8 includes a powerful API for controlling devices such as LEDs, relays, LCDs, sensors, motors, and switches. This article is the first…… Listed under: [Sensor - Transducer - Detector Projects](#)

1580. 

[Controlling an LED](#) For this part of the tutorial you will need: Usb to Mirco USB cable. Ethernet Cable. A computer. An SD card (4GB or bigger). A breadboard Female to male jumper cables or the Adafruit Assembled Pi Cobbler Breakout. 330 Ohm resistor. A bit of Electronics A…… Listed under: [LED Projects](#)

1581.

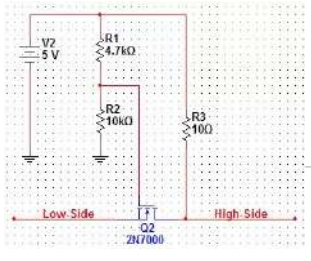
[BeagleBone and Raspberry Pi gain FPGA add-ons](#) At the Maker Faire in New York City, ValentFX showed off two open source FPGA boards that stack with BeagleBone and Raspberry Pi SBCs, and also unveiled BBot, a BeagleBone-based drink serving robot built with an earlier FPGA board version. The FPGA add-on boards use…… Listed under: [Robotics - Automation Projects](#)

1582.

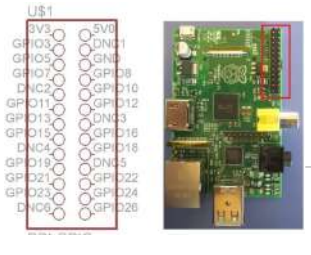
[Totally Wireless Bird House](#) Making of DIY bird house project with Raspberry Pi and Arduino Here is a detailed explanation how to make a totally wireless surveillance style bird house. About the design The main advantage of this device is that it is completely wireless, so you can hang…… Listed under: [Wireless projects](#)

1583.

[Tank Day 9: Power to the Pi](#) Last time around, we proved that the Raspberry Pi could indeed be integrated into a Heng Long Tiger I RC tank, and so control its functions. That’s a significant achievement, but there’s plenty more to do. Firstly and most importantly, we can’t yet drive the…… Listed under: [Other Projects](#)

1584. 

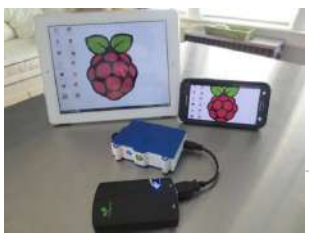
[Connecting an Arduino and Raspberry Pi](#) The use case of the GPIO pins on the Raspberry Pi are rather limited and since I have an Arduino Mega 2560 lying around I can easily connect the two. In the next couple of weeks I’ll explain my process of connecting the Arduino with…… Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1585. 

[Operating a Simple Switch and LED on the Raspberry Pi](#) GPIO, as may have been explained in other tutorials, stands for General Purpose Input/Output and a GPIO pin can be set high (taking the value 1) by connecting it to a voltage supply, or set low (taking the value 0) by connecting it to ground……. Listed under: [LED Projects](#)

1586. [Adding a Real Clock Time to your Raspberry PI](#) The Raspberry Pi doesn’t have a little coin-battery-powered 'Real Time Clock' (RTC) module, which keeps t even when the power is off, or the battery removed. To keep costs low and the size small, an RTC is not included with the Raspberry Pi. If your…… Listed under:

Clock - Timer Projects

1587. 

Control your Pi's Desktop from any Mobile Device One of the great things about a Raspberry Pi is that it can fit in your shirt pocket, but out of the box if you want to use it you need to hook it to a keyboard, mouse, bulky monitor, etc... nearly defeating the Pi's..... Listed under: Phone Projects

1588.

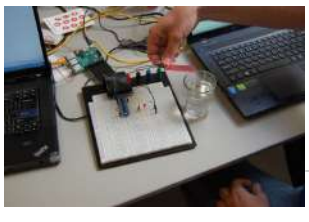
How to Access Raspberry Pi Directly through the Ethernet Port of PC The Raspberry pi is a single board minicomputer which has only the essential hardware included so as to meet the goal of low cost. The board is Raspberry pi board runs on ARM11 processor but is available at extremely cheap price. The board is designed..... Listed under: Development Board - Kits Projects

1589.

PiHub Hello! Welcome to another Instructable from NextFab. In this Instructable we will be showing you how to construct your very own PiHub. What is a PiHub you ask? The PiHub is a free standing, desktop information center that uses a simple LCD screen and 5..... Listed under: LCD Projects

1590.

Adding shutdown/restart pushbutton for Raspberry Pi This article deals with adding a push button on the Raspberry Pi's GPIO pins and writing a daemon that handles push button events. If we press the push button for less than 2 seconds, we want the daemon to shutdown the system and if the push button is..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1591. 

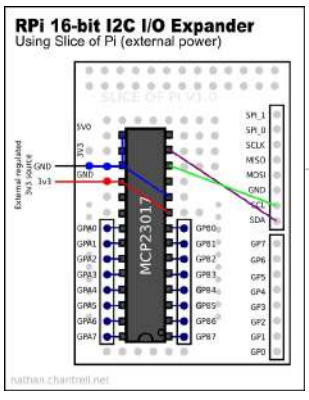
Raspberry pi 2 water alarm with t cobbler plus This is our first try with the raspberry pi 2 We wanted to create an headless water alarm Parts used: Raspberry Pi 2 Funduino water sensor 1k resistor Red Led Adafruit T-cobbler Plus Large breadboard (too large ;-p) Step 1: Setup of the PI 2..... Listed under: Sensor - Transducer - Detector Projects

1592.

Self Signalled Process System Using Raspberry Pi The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberry pi board runs on the Broadcom controller chip which is a SoC (System on Chip). This SoC has..... Listed under: Development Board - Kits Projects

1593.

MrRobot – Ubuntu Mobile app enabled Robotics(Raspberry Pi and arduino involved) Project MrRobot is an Ubuntu Mobile app enabled Robotics which has the feature of voice, touch and shake control to interact with the Rapiro robot. This project is done within 28 hrs in Ubuntu Shenzhen Hackathon by our team E-minors. All the code is onpensourced..... Listed under: Robotics - Automation Projects

1594. 

Raspberry Pi and I2C devices of different voltage After my recent posts on using the MCP23017 I/O expander with the Raspberry Pi several people have queried the connection of an I2C device running at 5v to the Raspberry Pi's 3v3 I/O. The reason why this is safe in this case is that on..... Listed under: Other Projects

1595.

AUTOMATIC DOOR OPENER CONTROLLED THROUGH SLACK The post was originally posted on http://www.visuality.pl/posts NodeJS Based Office Door Opener with using Raspberry Pi and Slack. Sesame At one of the hackathons we decided to automate our door opening process. It was a pain to do this manually because lots of clients and..... Listed under: Other Projects

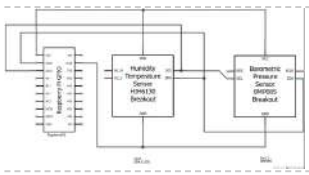
1596.

Build up a vehicle Week 01 January 9, 2013 (1 hour): Meet as a team after class to discuss preliminary project proposal.it is decided that we are going to build up a vehicle like a Google street car. January 10, 2013 (2 hours): Met as a team after class..... Listed under: Car Projects

1597. Cycle Chaser Project animations from the rear of your bicycle. The framerate depends on the speed you are moving at. A couple years ago, I created a dynamic bike headlight with a Raspberry Pi and a small, battery-operated projector. I've been eager to explore what else I..... Listed under: Sensor - Transducer - De or Projects

1598.

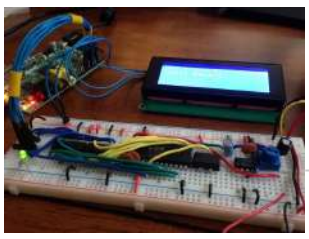
[Long-Range Wireless Broadcasts: Raspberry Pi Slow Scan Television (SSTV) Camera](#) In this project the Raspberry Pi with the PiCam is used as a wireless camera which can transmit images over long distances, usually hundreds of meters! Images are transmitted by amateur radio (ham radio) using slow scan television (SSTV) on the 2 meter band (144.5MHz)..... Listed under: [Wireless projects](#)

1599. 

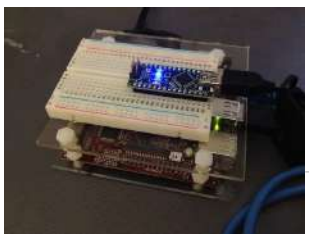
[Laboratory 'Weather Station'](#) This article describes how to make a network enabled weather station that may be used to monitor ambient air temperature, humidity, and barometric pressure in the laboratory. Usage Example When conducting experiments on the rotating turntable in the GFD laboratory it is often desirable to..... Listed under: [Sensor - Transducer - Detector Projects](#)

1600.

[How to build a RaspberryPi Cluster](#) RaspberryPi was invented as educational device to inspire children to study computer science. Nevertheless, in a couple of years it has become the toy of computer scientists, engineers and curious of every age. This project is our successful attempt to build an educational RaspberryPi Cluster composed by..... Listed under: [How To - DIY - Projects](#)

1601. 

[Raspberry Pi SID Player](#) Project overview: The Raspberry Pi SID player is a device which allows you to play music from the Commodore 64 computer using original audio hardware (the "SID" chip) through the Raspberry Pi. In addition to supporting the vast library of classic game music from the..... Listed under: [LCD Projects](#)

1602. 

[Controlling an Effect with Real Sensors](#) For this lab you need your Satellite CCRMA kit, a laptop computer with Ethernet adaptor to program it, and some headphones with a mini 1/8" (2.54mm) stereo jack. You are also invited to bring the following optional items, but they are by no means required:..... Listed under: [Sensor - Transducer - Detector Projects](#)

1603.

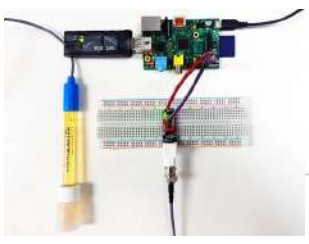
[How to send SMS from a PHP website through HTTP by using Raspberry Pi](#) Background of sending SMS from website with Raspberry Pi Are you curious about the most easiest way to send SMS from your website? Nowadays, I have become really interested in the field of Internet of Things (IoT), therefore I thought it would be cool to..... Listed under: [Internet - Ethernet - LAN Projects](#)

1604.

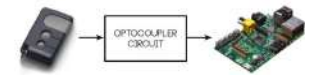
[Pi-Rex – Bark Activated Door Opening System with Raspberry Pi](#) (DISCLAIMER: Not meant as a security solution or a lesson in good dog behavior. It's an experimental proof of concept to play with the application of embedded computing to solve particular use cases) Sleep deprivation has been driving me mad recently. And it's all down..... Listed under: [Home Automation Projects](#)

1605.

[Macro Pi – Focus Stacking using Raspberry Pi](#) Here's another in the series of articles of photographic uses for the Raspberry Pi SBC (Single Board Computer). This time, it's re-purposing an old flatbed scanner as a macro rail for focus stacking images in macro photography. The Plan There's a common issue with shooting..... Listed under: [Video - Camera - Imaging Projects](#)

1606. 

[Atlas Scientific and Raspberry Pi](#) This Instructable will you show you how to interface with Atlas Scientificsensors using a Raspberry Pi. There are 3 main ways to do this: By hooking a keyboard, monitor, and mouse up to the Pi and using it as a stand alone computer. By connecting..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1607. 

[RPi Garage Door Opener for Rentals](#) The problem with renting a unit, is that we are unable to modify much of the furniture in the house without upsetting our landlords. But we would still like to do it, and it is possible to do a few things. Our particular rental unit..... Listed under: [Home Automation Projects](#)

1608.

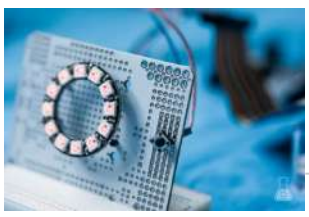
[Raspberry Pi Cloud IP Camera with POE](#) I was inspired by scavix's work with the instructable Raspberry Pi as low-cost HD surveillance camera so I decided to make my own Raspberry PI based IP camera that also features POE and supports integration with the Google Drive. The video streaming can be simply..... Listed under: [Video - Camera - Imaging Projects](#)

1609.

[Reading Analogue Sensors With One GPIO Pin](#) Unlike some other devices the Raspberry Pi does not have any analogue inputs. All 17 of its GPIO pins are digital. They can output high and low levels or read high and low levels. This is great for sensors that provide a digital input to..... Listed under: [Sensor - Transducer - Detector Projects](#)

1610.

Audio Solution with Control and Visualization on a Raspberry Pi with Touchscreen (Squeezebox Touch functionality) We present you a possibility to select and control your Raspberry Pi audio player directly through a touch display. Our setup is based on the Squeezebox technology and therefore also enables multi-room audio solutions. Our idea was to find a simple and affordable way to..... Listed under: Sound - Audio Projects

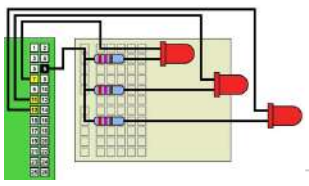
1611. 
London Underground line status with Neopixels In this quick tutorial, we'll put together a snazzy London Underground tube line status checker using a Raspberry Pi and Adafruit's awesome Neopixel LED rings, to recreate the classic Underground roundel! We'll light up the Neopixel LEDs using the official colours of the Tube lines,..... Listed under: LED Projects

1612.
Raspberry Pi Music Fingers Creating music is always fun, but making it with your own DIY musical instrument is much better !! Whether you are a professional musician looking for that next new instrument to try or an amateur enthusiast who has basic knowledge of electronics, use the Raspberry..... Listed under: Development Board - Kits Projects, Sound - Audio Projects

1613.

Making a datalogger for a Kamstrup electricity / gas meter with Raspberry Pi! About Raspberry Pi So finally I received my new Raspberry Pi. This is a small, low power ARM linux board featuring a ethernet adapter, 2 USB ports and even a full-HD HDMI port for a mere $30!. Check out www.raspberrypi.org for more information. After running..... Listed under: Other Projects

1614.
Honda Accord Raspberry Pi based onboard computer Intro So I had this crazy idea about fitting onboard computer to my 04' Honda Accord Tourer (Exec trim with premium speaker system – non-navi version). Been googling this and digesting available information, finally stumbled upon this excellent Engineering(DIY) project, blog and associated forum –..... Listed under: Car Projects

1615. 
Raspberry Pi Robotics #1: GPIO Control This video explains how to connect LEDs to a Raspberry Pi's general purpose input-output (GPIO) pins, and how to write Python code to turn them on and off. This video shows how to construct a Pololu Zumo robot chassis, how interface it to a Raspberry..... Listed under: LED Projects

1616.
Plant Micro Climate Some plants require pretty specific environments to thrive. Many beautiful plants grow best in a climate that is nothing like the climate where you live. Orchids are a perfect example of this. They require cool temperatures and very high humidity, nothing like the environment where..... Listed under: Development Board - Kits Projects

1617.
Front door bolt unlocker Opens your front door! see video of the end result (http://www.youtube.com/watch?v=9qZrc6Llg1o) Parts: - 4xAA Rechargable Switchable Battery Pack + case - Continuos Rotation Servo. (You can also a regular servo, with some modifications to the software) I used - Futaba S148 - Bread board -..... Listed under: Home Automation Projects

1618.
DIY Infrared Motion Sensor System for Raspberry Pi During the month of July 2015, I completed a high school internship at Colorado State University, and one of the projects that I worked on was that of a infrared proximity sensor for Raspberry Pi. This short range infrared sensor can be attributed to a..... Listed under: Sensor - Transducer - Detector Projects

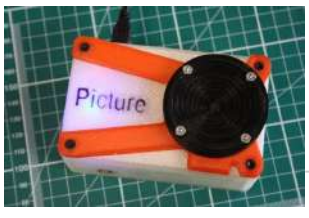
1619.
Lunch Box Computer with Raspberry Pi This is a quick and easy project to build a portable Raspberry Pi computer that fits right in a lunch box. It's a good first Pi project since it requires no coding, soldering or tooling of any kind. All you have to do it acquire..... Listed under: Development Board - Kits Projects

1620.

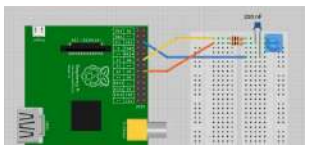
Breakout RaspberryPi This instructable is video game of breakout on RaspberryPi. It is easy to make this video game. Let's make and fun!! Step 1: Materials 1. RaspberryPi (I used RasberryPi rev2) ※include keyboard,mause,monitor,SDcard 2. Tact switch × 4 3. Electrical resistor × 4 4. Some jumper..... Listed under: Game - Entertainment Projects

1621.
Building the MonkMakes Raspberry Pi Robot Kit The latest product from MonkMakes is a robot kit that I have designed using the RaspiRobot Board v2 (RRB2). The kit is available from MonkMakes. Overview The kit comprises: * a robot chassis, including two gearmotors and a 6 x AA battery holder. * a..... Listed under: Robotics - Automation Projects

1622. Gertboard – The Ultimate Raspberry Pi Add-on Board The Gertboard is an add-on board designed by Gert van Loo who is also one of the hardware engineers involved in the original design of the Raspberry Pi. The board was originally sold by Farnell/Element14 in kit form but has just been re-launched as a..... Listed under: Development Board - Kits Projects

1623. 

[Picture – The 3D Printed Raspberry Pi Camera.] Way back at the beginning of 2014 I published an Instructable camera called the SnapPiCam. The camera was designed in response to the newly released Adafruit PiTFT. It's been well over a year now and with my recent foray into 3D printing I thought now..... Listed under: [Video - Camera - Imaging Projects]

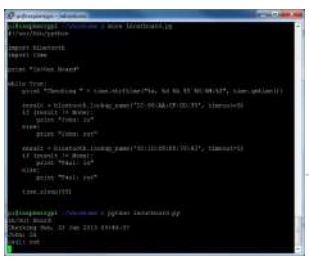
1624. 
[Analog Sensors without Analog Inputs on the Raspberry Pi] The Raspberry Pi does not have any analog inputs, but that does not mean that you can't use some types of analog sensors. Using a couple of resistors and a capacitor, you can use a "step response" method to measure resistance. Which is just great..... Listed under: [Sensor - Transducer - Detector Projects]

1625.
[Internet controlled SCALEXTRIC with Raspberry Pi!] With this project I can use dataplicity (dataplicity.com) and a Raspberry Pi to control the speed of a car on a SCALEXTRIC system from the internet. I had a look around for tips on where to start and found a few people had had a..... Listed under: [Internet - Ethernet - LAN Projects]

1626.
[Configuring the Raspberry Pi ethernet port for remote control] This instructable will show how to quickly configure the Raspberry Pi ethernet port and run it remotely. This eliminates the need to connect a monitor, keyboard and mouse to use the device. This is a very basic Instructable for PC/Windows users or other not familar..... Listed under: [Internet - Ethernet - LAN Projects]

1627.
[Beaglebone Black Web Control Using WebPy] Ever wanted to create a way to control your garage door using your phone maybe collect data and view it from your laptop. There is a single board computer called the Beaglebone Black which is an extremely powerful device that allows you to control its..... Listed under: [LED Projects]

1628.
[Pulse Width Motor Control] My last project had me digging through old robotics parts to find an H-Bridge Motor Controller. I found one that had several TTL chips on the circuit as well and it reminded me of a trick some of you may find useful. First, lets define..... Listed under: [Motor Projects]

1629. 
[Raspberry Pi Bluetooth In/Out Board or "Who's Home"] I wanted to create an electronic In/Out Board. The type you may have to record who is present or not in a company or home. It is usually placed by the front entrance so anyone can see who is in or out. I also wanted..... Listed under: [Bluetooth Projects]

1630.
[All-in-One Raspberry Pi Getting Started Guide] Raspberry Pi, one of the most ingenious invention for makers and hackers. Before we get started into the nitty gritty details of getting it setup, we first must ponder over the question that what the Raspberry Pi actually is? Raspberry Pi is a linux based..... Listed under: [Development Board - Kits Projects]

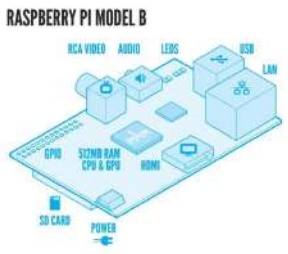
1631.
[How to make a DIY home alarm system with a raspberry pi and a webcam] Traditional wireless CCTV cameras are cheap but anyone with a wireless receiver can view your signal. On the other hand, IP cameras are secure but they can be quite expensive and usually the video quality is poor—unless you go for a really expensive model. Lately..... Listed under: [Home Automation Projects], [How To - DIY - Projects]

1632.
[Raspoulette Prototype] Hi guys, When i see a raspberry pi contest i decide to make a prototype of an idea i had for few time, let me present my Raspoulette! I will try to explain how to make an amazing Raspoulette! Raspoulette is an autonomous solar powered..... Listed under: [Robotics - Automation Projects]

1633. [BrickPi Bookreader] Wouldn't it be nice of someone read you a book aloud when you were feeling lazy to read it yourself? Have you ever wanted to get that Kindle Book into another format, or just copy the text? Have you ever wanted to get all of..... Listed under: [Robotics - Automation Projects]

1634.

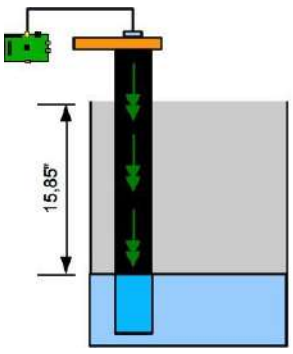
[Wireless IKEA DIODER mod, the cheap way](#) If you are looking for a cheap and easy way to control your lights with your smartphone or your computer this is the tutorial for you! these are the required items for this mod: Ingredients 🙂 An ikea DIODER An arduino (any will do but..... Listed under: [Wireless projects](#)

1635. 

[Raspbery Pi Wireless Auto-Sorting NAS/Media Server using MiniDLNA and Samba](#) I have a couple of spare USB hard drives lying around, and of course a Raspberry Pi (headless). I put them to use as a wireless NAS / Media server. I'd also like my clients to be able to make the Pi automatically download torrents..... Listed under: [Wireless projects](#)

1636.

[Browser Controlled Bot](#) We would like to introduce the BrowserBot: a project at Dexter Industries to turn the Raspberry Pi into a robot. "The browserBot" is a web-browser controller robot using the BrickPi. With this project, we demonstrate how to control a BrickPi robot directly from the browser..... Listed under: [Robotics - Automation Projects](#)

1637. 

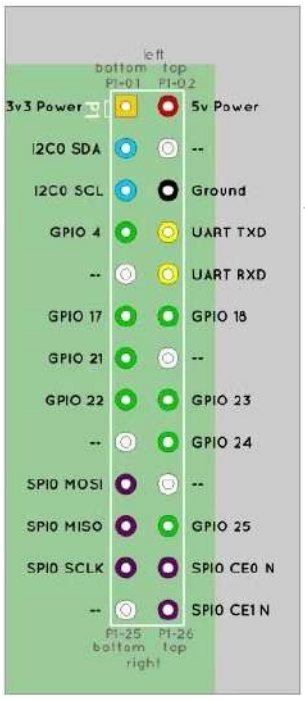
[Sump pump water level: The hardware](#) The second part of this tutorial about the software can be found here: http://www.instructables.com/id/Sump-pump-water-level-The-software/ What you need: * 2 X pieces of wood 4X6. 1/4'' and the other 1/2'' thick * 1 X 3 inches pipe. length varies depending of the deep of your pit..... Listed under: [Home Automation Projects](#)

1638.

[Real World Minecraft](#) We all Know Minecraft is an awesome game, and raspberry pi has made it more awesome. With the Minecraft API we can now write simple python scripts to interface read world sensors and button to the Minecraft world. I have listed out some of the cool ideas on..... Listed under: [Game - Entertainment Projects](#)

1639.

[Prototype and configure your own Real Time Clock module for the Raspberry Pi (Open Source Hardware and Software Configuration)](#) To keep the price of the raspberry pi down the developers left out some of the essentials one of those is the real time clock. At the moment the raspberry pi gets it time over the Ethernet from updating the time automatically from the global ntp (nework..... Listed under: [Clock - Timer Projects](#)

1640. 

[*Preliminary* SPI on the Pi: Communicating with a SPI 3-axis accelerometer using a Raspberry Pi](#) Step by step guide on how to setup Raspbian, and communicate with a SPI device using bcm2835 SPI library (NOT bit banged!) This is still very preliminary... I need to add better pictures of physical hookup, and work through some of the awkward code. ..... Listed under: [How To - DIY - Projects](#), [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1641. [Garage door controller using Raspberry-Pi: Monitor status and Control your garage from anywhere in the world!](#) Have your ever drove out of your garage and after few minutes into your drive, feared you did not close the door? ** What if you did really leave the door open? The garage door might close itself after few minutes, but that means your..... Listed under: [Home Automation Projects](#), [Internet - Ethernet - LAN Projects](#)

1642.

[Turn your Raspberry Pi into a Wireless Portable Bluetooth Audio System A2DP] Howdy folks! I had the idea of turning my Raspberry Pi into something like the Beats By Dre portable audio system found here: http://www.beatsbydre.com/speakers/beatbox-portable-usb/beatbox-portable-usb,default,pd.htmlIt's a cool product, don't get me wrong, but I'm not really down to pay $400+ tax for some fancy looking speakers..... Listed under: Radio Projects, Sound - Audio Projects

1643.

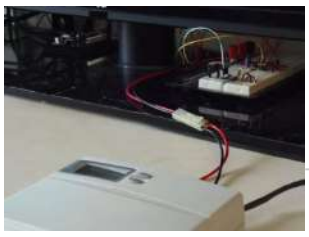
The Tweeting Intercom: (Door Strike) Relay Monitoring w/ Raspberry Pi This instructable is all about monitoring the state of relays using a Raspberry Pi. In the particular case we will have a look at a sophisticated Telegärtner DoorLine Pro intercom which holds two voltage-free relays. Normally, those are used to trigger an electric door strike..... Listed under: Home Automation Projects, Interfacing(USB - RS232 - I2c -ISP) Projects

1644.

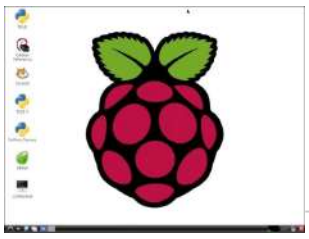
Reuse Unwanted Infrared Remote Control to Use With XBMC/KODI on Raspberry Pi Introduction Remote controlling the media center is a major application of Linux Infrared Remote Control (LIRC). There are quite a number of tutorial on how to implement infrared remote control with XMBC/KODI. After following the excellent tutorial published by adafruit.com, my DVD remote control unit..... Listed under: Home Automation Projects, Interfacing(USB - RS232 - I2c -ISP) Projects

1645.

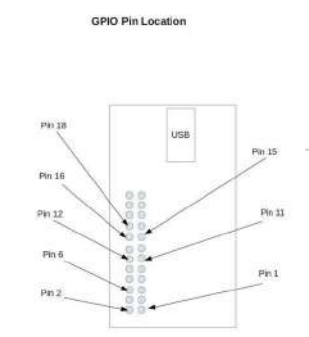
Fireside Internet Radio Player for Elderly Users – built with Raspberry Pi Introduction: Today we have amazing access to great streaming content: music, news, weather, stories, etc. Yet, this access is limited to those who can navigate today's electronic devices. This project is based on a belief that the elderly want and need this access - they..... Listed under: Internet - Ethernet - LAN Projects

1646. 

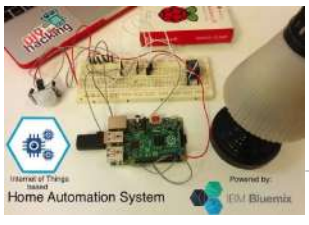
Log and Graph 24V Thermostat Events (Optocoupler + Raspberry Pi) using raspberry There are a lot of Instructables that show how to make a thermostat. But what if you already have a thermostat, and you want to log or monitor when it turns off and on? This Instructable shows how to use an optocoupler to obtain logic-level..... Listed under: Temperature Measurement Projects

1647. 

Bluetooth Low Energy: Read-Write to Sensor Network from Raspberry Pi using Raspberry Pi Originally published in this blog. The goal of this tutorial is to demonstrate how you can read and write from a Bluetooth Low Energy (BLE) device. For example, if you want to read the 'number of steps' data from your fitbit and make interesting apps..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1648. 

Blink a series of LEDs using Python Programming Language and Raspberry Pi using Raspberry Overview of Steps In the first phase, I will install only one LED. Next, I download the LED class python module that represent one hardware LED. I will run the LED class python module to blink that LED. The first phase serves as a "Proof..... Listed under: LED Projects

1649. 

IoT based Raspberry Pi home automation using IBM Bluemix We all have at some point of life desired to control everything at the click of a button. May it be turning off unnecessary lights when you are not at home to detecting intruders when you are not around. This tutorial will guide you to..... Listed under: Home Automation Projects

1650.

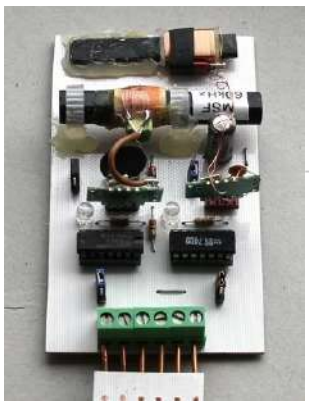
A novel design for raspberry pi wireless shield extension board using raspberry Recently, we design a type of raspberry pi wireless shield (or extension board) for raspberry pi. By using this rpi shield, you can conveniently control your objective, like LED, TANK, CAR, etc. In this example, by using this wireless shield, we control the LED lamp..... Listed under: Radio Projects

1651.

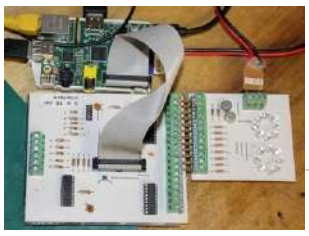
[A Really Inexpensive Raspberry Pi GPIO cable] This instructable can be accessed at the author's website - http://www.neatinformation.com/howto/Pi%20GPIO.html. If you link to this instructable from another website, please include a link to the Neat Information website. The project described in this article requires basic mechanical and electronics skills and is provided for..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1652.

[Pure Pi: Control custom stompbox effects on a Raspberry Pi with a smartphone] This is my first instructable, although I have been working with Pure Data, Raspberry Pi, and other digital audio for quite some time. If you'd like to see more instructables like this, vote for me! Ever wonder how digital effects are created? Want to customize..... Listed under: [Phone Projects]

1653. 

[A combined MSF/DCF atomic clock receiver] For this to work you must obviously live in an area that can receive both signals. My circuit is based on two modules taken from two radio clocks bought at Lidl's supermarket. Originally both were for the DCF clock but by substituting the original 77.5kHz..... Listed under: [Clock - Timer Projects]

1654. 

[LED circles using multiplexing] This project uses two groups of eight LEDs sharing eight GPIO pins via one of my Pi interfaces. The anodes of each group of LEDs are commoned and driven by a BFY51 transistor. The two transistors are controlled by a further two GPIO pins to..... Listed under: [LED Projects]

1655.

[GitPi: A Private Git Server on Raspberry Pi] Git is usually used in synchronization with GitHub — the former is a source code management system and the latter is a website where you can share/contribute Git repositories with the larger internet community. For those wanting to get started with GitHub, I've written this..... Listed under: [Internet - Ethernet - LAN Projects]

1656.

[Raspberry Pi Turing Machines] Prototype Step 1: Set up the supply rails Components: – 1 × Breadboard and jumpers. – 1 × M/F jumper cables. Link the rails together as before using the jumpers and connect the M/F jumper cables to the rails (red to 3.3V, black to GND)..... Listed under: [LED Projects]

1657.

[Remote Raspberry Pi Robot (PS3 Controller) – Fablab NerveCentre] These instructions try to assume very little. Hopefully, if you can boot a Raspberry Pi and have an internet connection you should be able to complete this great little project. Basically, this is a project which will result in some specific areas which can be..... Listed under: [Game - Entertainment Projects]

1658.

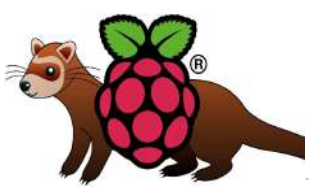
[Transfer file from Computer to Raspberry Pi Using USB-Serial Cable] Introduction This short tutorial extends on Adafruit's excellent tutorial on using Serial Cable(also known as Serial Console) to remote control the Raspberry Pi (RPi). Adafruit's tutorial demonstrates how to connect the correct USB-Serial cable to the correct GPIO pins. However, the tutorial ended with no..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1659.

[BrickPi Bookreader: Digitize Books With Mindstorms and Raspberry Pi] A few months ago, we made a Book reader powered by the BrickPi which had the ability to read pages from your Kindle. There was a huge response to the project. But what everyone really wanted was a bookreader that could read a real paper..... Listed under: [Other Projects]

1660.

[Automatic USB HDD power control for a Raspberry Pi based NAS] The Raspberry Pi board is widely used to build home-servers by the Do It Yourself (DIY) community, so it seemed a good choice to be the base for my home Network Attached Server (NAS). This NAS should have two main types of storage: Solid State..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1661. 

[FerretPi: Using Raspberry Pi as a Secure FTP Server] I know what you're thinking: "How cool would it be if I had my own Google Drive/SkyDrive/Dropbox that I can use whenever I like?" Or maybe you are just getting into the Maker movement and you think it's the greatest thing since canned bread. You've probably..... Listed under: [Internet - Ethernet - LAN Projects]

1662.

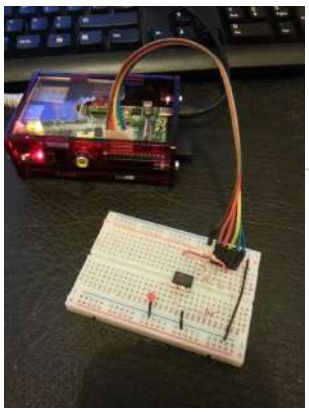
[RaspiBoy, Raspberry Pi Gameboy, SuperPiBoy: A RaspberryPi inside a Gameboy] Do you have a Gameboy case? Do you have RaspberryPi? Now let's build a RaspiBoy. It's a RaspberryPi inside Gameboy running multiple emulators. It makes you feel back the old days and one of the best gadgets for Retrogaming. My RaspiBoy features: 3.5" TFT display..... Listed under: [Game - Entertainment Projects]

1663.

TweeToy by Raspberry pi using Python I created a Toy which Talks somebody's tweets using Raspberry Pi. This Toy catches object by distance sensor and then make sound (Tweet). The architecture is very simple. For getting Tweets, just using twitter api for python. And playing sound with "AquesTalk Pi" (free) which..... Listed under: Game - Entertainment Projects

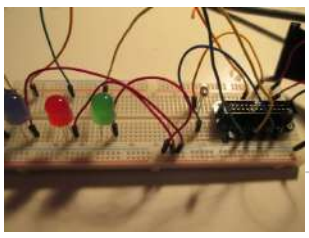
1664.
How to build a People Counter with Raspberry Pi and Ubidots In this simple project we'll use a motion sensor to detect if an object is passing in front of our Raspberry Pi. Then we'll count how many times that happens, and send this value to Ubidots. People counters are typically expensive devices used in the..... Listed under: Calculator Projects

1665.
Raspberry Pi controlled Red Car Trolley Now the train around your Christmas tree or your favorite remote controlled toy can be controllable from the web or any mobile device. Why would you do that if you already have a remote? You do this just because you can! I used a Red..... Listed under: Car Projects

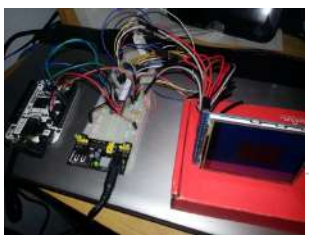
1666. 
Programming the ATtiny85 from Raspberry Pi These instructions tell you how to setup and program the ATtiny85 microcontroller from a Raspberry Pi via the SPI interface. Lots of people use the Ardiuno to do this (then you can use the Arduino IDE and simplified C commands), or you can use a..... Listed under: Raspberry Programmer Projects

1667.
DIY iPhone controller for Raspberry-Pi (OSC) To start off this project I would like to explain how all this will work. We will be using a form of communication called OSC (Open Sound Control) and an app called "TouchOSC" which is available on the Google Play and Apple app store, along..... Listed under: How To - DIY - Projects, Phone Projects

1668.
PiFace LED Chasing Lights Raspberry Pi This instructable will allow you to use your PiFace to control 8 LEDs in a chasing flashing pattern. This will help you get to grips with basic use of python to control the PiFace as well a basic electronics, I'm writing this up in full..... Listed under: LED Projects

1669. 
Raspberry Pi Photocell log and alert system This is a simple instructable for making a RasPi-based photosensor-triggered alert and logging system which can easily be extended to show possible entries into a room like a closet or equipment locker that's usually dark, or to monitor light levels for any other reason. In..... Listed under: Sensor - Transducer - Detector Projects

1670.
Power to your Living room via Raspberry Pi The Idea is to create a controlled living room/entertainment station using the raspberry Pi as a media center, torrent down-loader,file storage and to operate electrical switches. Please use caution and diligence as components use live AC and hence is dangerous. Step 1: Items you will..... Listed under: Home Automation Projects

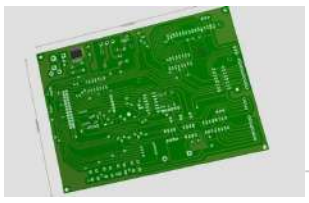
1671. 
Environmental Monitoring with BaeagleBone or RaspberryPI and Ardunio This is a project I've been working on for a while, and still have ways to go, but I have enough success right now that I can I share what I've got. This covers connecting a Beaglebone and an Arduino via TTL serial and I2C,..... Listed under: Metering - Instrument Projects

1672.

Web Enabled Garage Door (Raspberry Pi) Goal to create a web based garage door opener that should retrofit to most standard openers. Tested with circa 1990s Chamberlain 1/2 hp opener. Once competed your garage door could be opened from your cellphone or computer. Raspberry PI - Raspbian (Rev B used for..... Listed under: Internet - Ethernet - LAN Projects

1673.
Raspberry Pi and Wiimote controlled Robot Arm I received a robot arm as a birthday present, but after about the first day the controller that came with it became a bit dull to use. Later I bought the usb controller that was made for the robot, but once again the canned software..... Listed under: Robotics - Automation Projects

1674. Raspberry Pi Arcade Game Emulator in an Atari Lynx This project is the summation of various similar tasks to use a Raspberry Pi as a portable games emulator. It's heavily indebted to the excellent and funAdafruit PiGrrl project and DDG's great work to add sound to that project here. Whilst I was happy with..... Listed under: Game - Entertainment Projects

1675. 

[Raspberry Pi – Revision 2 DIY Add-On Board] On the Raspberry Pi, there are several connections which can be used for expansion: 1, The Rpi GPIO (General Purpose Input/Output) pins are exposed, that means that expansion boards are able to talk directly to the CPU. 2, The DSI connector will allow low-level interfacing..... Listed under: [Development Board - Kits Projects], [How To - DIY - Projects]

1676.

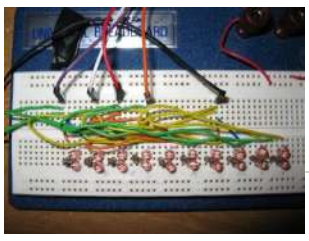
[How to make your own portable Raspberry pi] This tutorial show you how to make your own portable rapsberry pi, with a screen, access to USB, Ethernet and HDMI ports open to access on the side of the case. This is by no means a good tutorial, it is simply a way of..... Listed under: [How To - DIY - Projects]

1677.

[Raspberry Pi Media Server – MiniDLNA] Hey. In this instructable I will be showing you how to make a raspberry pi media server using MiniDLNA. This will allow you to stream your photos, videos and music around your network. This is my first instructable so sorry if it isn't very good..... Listed under: [Raspberry Programmer Projects]

1678.

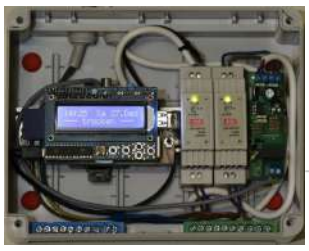
[Raspberry Pi (security) Slow Scan Television Camera] For project updates, visit: AgriVision - Raspberry Pi SSTV Camera. The goal of this project is to use the Raspberry Pi with the PiCam as a wireless camera which can transmit images over long distances, usually tenths of kilometers. Images will be transmitted by amateur..... Listed under: [Video - Camera - Imaging Projects]

1679. 

[Controlling a Raspberry Pi RC Car With a Keyboard] In this intermediate tutorial you will learn how to operate a hacked RC car with a keyboard using a model B Raspberry Pi device using Python. The key points in this tutorial include: • Configuring the virtual Pulse Width Modulation (PWM) for the GPIO pins..... Listed under: [Car Projects]

1680.

[Raspberry Pi Smartphone Controlled Rc Car] Use your raspberry pi to control a 1/10 scale RC car via a web page hosted wirelessly on your PI. All you need to do is set up your PI to use your mobile as a hotspot then log onto the appropriate web page (hosted..... Listed under: [Car Projects]

1681. 

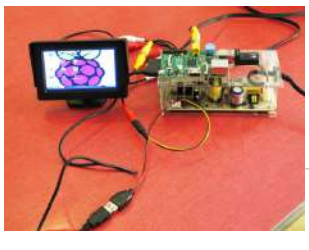
[Raspberry Pi water alarm system] Instructions for employing a Raspberry PI as a water alarm system Version 1.0, published in Jan 2015 The Raspberry Pi reads the status of one or two water sensor device(s) on one or two of its GPIO pins. When water is detected the Raspberry Pi..... Listed under: [Clock - Timer Projects]

1682.

[Python and Raspberry Pi Temperature Sensor] It's been quite a long time, when I'd first posted this RPi sample. Time passed, I'd gathered some feedback form the community, took into account the comments, and this sample is ready to be published at Instructables for the public interested in microcontrollers and the..... Listed under: [Sensor - Transducer - Detector Projects], [Temperature Measurement Projects]

1683.

[Vintage DAC for RaspberryPi audio] Idea... I was curios about some old school R2R DACs namely the BurrBrown PCM56P. They where used in the late 80's in some of the better CD players like SonyES222/DenonDCD1500/MaranzXY whatsoever. There is some discussion in certain forums about their more or less superior sound..... Listed under: [Sound - Audio Projects]

1684. 

[LOG Raspberry Pi with car monitor] So this Lazy Old Geek (LOG) decided to buy a Raspberry Pi. Now the Pi itself is really small (see picture) but the first problem I found was that with the all the cables connected, it's not very stable. The cables, especially my HDMI cable..... Listed under: [Car Projects]

1685. [Arc Software Consultancy using the Raspberry Pi] I know it has been ages since I posted here so I thought I would put something up for Halloween. I have a brilliant and simple project here. It's easy to understand and, more importantly, it actually does work. I accidentally scared myself with it..... Listed under: [Development Board - Kits Projects]

1686.

[Making Your Apartment Buzzer Party Friendly With Raspberry Pi and Twilio](#) Amy Ciavolino's friends were stuck outside of her apartment waiting to be let in to the party. They repeatedly pressed Amy's apartment buzzer with no luck. The buzzer was too quiet, and Amy's party was too loud. Throughout the night, the cycle repeated: Amy's friends..... Listed under: [LED Projects](#)

1687.

[Wireless Raspberry Pi Radio: Pianobar](#) * This entire process should take about 20 minutes Pianobar is a free/open-source, console-based client for the personalized online radio Pandora. Feature: play and manage (create, add more music, delete, rename, ...) stations rate songs and explain why they have been selected upcoming songs/song history..... Listed under: [Radio Projects](#)

1688.

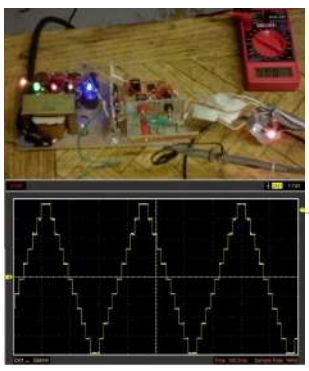
[Raspberry Pi Garage Door Opener](#) Hello Everyone! This instructable explains how I setup a Raspberry Pi to open my garage door using a smarthphone. While this has been done before, I thought I'd post my solution. This was my first hardware project and instructable ever and I'm sure I made..... Listed under: [Home Automation Projects](#)

1689.

[Home Automation Raspberry and Phidgets](#) In previous tutorials we used Raspberry Pi to drive Phidgets InterfaceKit. We have also set up a web server on Raspberry. In this tutorial we will use the information gathered to create an Home Automation System managed with a Web Application. You need: a Raspberry..... Listed under: [Home Automation Projects](#)

1690.

[Raspberry PI auto-boot](#) Ever want your Raspberry pi project to have a script that interfaces with I2C to start automatically after a power cycle? Would you like the vnc session to start at power up as well? This instructable will show how to make a perl script that..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#), [Raspberry Programmer Projects](#)

1691. 

[DIY tACS: Hardware for machine-human telepathy experiments](#) These are instructions for building a computer-controlled tACS device.Transcranial alternating current stimulation (tACS) is a form of neuronal stimulation that operates by running an alternating current through the human brain. This current can be any waveform from random noise (tRNS is the official research term..... Listed under: [How To - DIY - Projects](#)

1692.

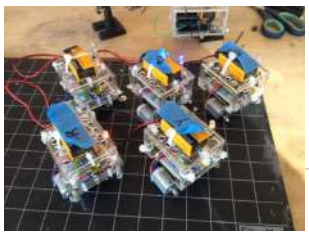
[Intel Edison Spectrophotometer](#) This instructable will explain how to build a fairly basic. Of course, this device is nothing compared to a commercial spectrophotometer, but it will allow the builder to understand how such a device works to using it for DIYbio. Know-how The spectrophotometry is the quantitative..... Listed under: [Metering - Instrument Projects](#)

1693.

[Raspberry PI Camera Spinner 3D Print](#) This Instructable is for a 3D printed camera-spinner module for the Raspberry PI Camera board. As part of a larger project (a portable Raspberry PI computer), I needed a way to implement a front and rear facing Raspberry PI Camera board. Fitting two camera boards..... Listed under: [Video - Camera - Imaging Projects](#)

1694.

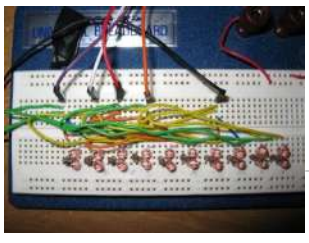
[Mho PlayGround Circuit Scribe](#) Siempre he querido jugar el juego de Adafruit Industries de "Mho Playground" pero solo esta para iOs y yo tengo Android, así que decidí hacer mi propia versión en el mundo real, les presento "Mho Playground Circuit Scribe" Beta, con arduino UNO, processing y circuit..... Listed under: [Game - Entertainment Projects](#)

1695. 

[BristleSwarm: Explorations into Swarm Robotics](#) A growing branch of robotics research is the study of swarm organization, emergent behavior and artificial intelligence through the use of autonomous robotic agents. In this Instructable, I'm going to walk you through a one week project that I created as part of my Masters..... Listed under: [Robotics - Automation Projects](#)

1696.

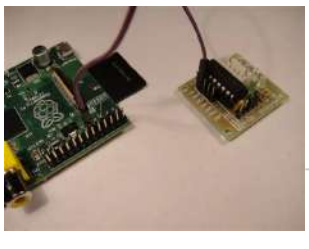
[Raspberry Pi Medal Light](#) You love the Olympics but you don't have time to check if your country has won any medals. Using IFTTT and Ledborg on the Raspberry Pi, you can know get notified of any medal just by looking at your Pi (and then tell the whole..... Listed under: [LED Projects](#)

1697. 

[Charlieplexing with the Raspberry Pi](#) I've always been interested in Charlieplexing, but never had any means to get into it. When I got my Raspberry Pi, I figured it would make a great platform to learn how to Charlieplex. There are already a ton of Instructables on Charlieplexing out there,..... Listed under: [LED Projects](#)

1698.

[Raspberry pi arcade project](#) Hello their ''young'' follower, in this projects of mine I've will be telling you about one of my little inventions and in return i would like you to hit the vote button for me in the ''contents'' tab for more interesting projects and ideas. ''my..... Listed under: [Game - Entertainment Projects](#)

1699. 

[How to connect Stepper motors to a Raspberry Pi](#) The page demos how to connect 28BYJ-48 stepper motors to a Raspberry Pi. These small stepper motors are available on ebay for £3.99 + p+p. They're not very powerful, but they make for convenient testing with a Raspberry Pi, as they will run straight off..... Listed under: [Motor Projects](#)

1700.

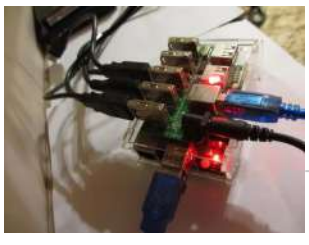
[Raspberry Pi Doorbell (Python)](#) Raspberry Pi Along came the Raspberry Pi and I noticed that it had a GPIO (General Purpose Input Output) interface. Ok I have to admit – I didn't really know what that was until I read up on the Raspberry Pi and reports were saying..... Listed under: [Home Automation Projects](#)

1701.

[Enable Raspberry Pi to Print to Networked Printers and Print Servers](#) Introduction Ever since my desktop PC went kaput. I have been using Raspberry Pi as my desktop PC replacement. Why?, you ask. Because I'm poor and can't afford a proper desktop computer. Anyway I got the idea for this instructable when I tried to print..... Listed under: [Other Projects](#)

1702.

[PROJECT – CONTROLLING A MOTOR – FORWARD AND REVERSE SWITCHING](#) INTRODUCTION This project will show you how to control the rotational direction of a small motor without using any mechanical relays. The Texas Instruments L293D dual H-bridge IC has two separate control circuits and can control two conventional DC motors or one stepper motor. In..... Listed under: [Motor Projects](#)

1703. 

[Raspberry Pi Torrent, Samba and DLNA with 3+ hard drives](#) There are many Raspberry Pi guides out there that helps you to transform your Pi into a server supporting downloading torrents and sharing files via Samba and DLNA. However, they all have a major flaw: supporting only ONE hard drive. In this instructables, I will..... Listed under: [Other Projects](#)

1704.

[Raspberry Pi GPIO home automation](#) I had heard about GPIO pins on the raspberry pi and decided to do something with it. And with the holidays coming, wouldn't it be great to be able to turn on and off your light display from the web! This is a pretty simple project that..... Listed under: [Home Automation Projects](#)

1705.

[Raspberry Pi Temperature Logger](#) Here are the instructions to build a simple termperature logger using a $5.00 I2C temperature sensor. The data is stored to the SD card and can be easily imported into excel. Simply by changing or adding other sensors other types of data can also be..... Listed under: [Temperature Measurement Projects](#)

1706.

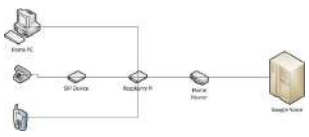
[Plotly + Atlas Scientific: Graph Real-Time Dissolved Oxygen with Raspberry Pi](#) Atlas Scientific makes an amazing suite of scientific grade environmental monitoring sensors that have a perfect synergy with the Plotly data visualization platform. This Instructable will show you how to hook up an Atlas Dissolved Oxygen sensor and a Raspberry Pi to Plotly's real-time graphing..... Listed under: [Other Projects](#)

1707.

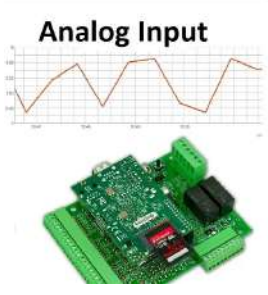
[The SnapPiCam | A Raspberry Pi Camera](#) Adafruit launched it's PiTFT not long ago and I bought one immediately from Pimoroni. Soon after that Adafruit published a tutorial entitled DIY WiFi Raspberry Pi Touchscreen Camera. I had a good read through it and on the final page the final paragraph was; The..... Listed under: [Video - Camera - Imaging Projects](#)

1708.

[Micro Raspberry-Pi arcade cabinet] Fully functional micro arcade machine using a Raspberry Pi model B or B+. I always wanted a tiny arcade machine for my desk, I decided to build it as small as possible. It may look simple from the outside but a lot of engineering went..... Listed under: [Game - Entertainment Projects]

1709. 

[Free Landline Using Google Voice and a RaspberryPi] Disclaimer: The following article is intended for users comfortable working on Linux based machines. In this article I'll review the steps I used to configure a VoIP landline using a SIP interface through a Raspberry Pi based PBX with Freeswitch and Google Voice. In other..... Listed under: [Internet - Ethernet - LAN Projects]

1710. 

[0-5V Analog input from Raspberry Pi graphed on Web] Using the PIC PI expansion board combined with your Raspberry Pi i will show you how you can Graph analog Voltages to Cosm Hardware needed for this project 1 x Raspberry Pi 1 x PIC PI development board (you will be able to purchase..... Listed under: [Internet - Ethernet - LAN Projects]

1711.

[“ArdiPi” Wireless Arduino and R-Pi Rover] "ArdiPi" The Wireless Arduino and Raspberry Pi Rover By: Greg So basically let me tell you how this project works. You simply have an Arduino (Uno or Leonardo) which you use to connect to two motors and control them. Then you have a RaspberryPi which..... Listed under: [Radio Projects]

1712.

[Raspberry Pi Alamode CNC Controller] This is my first attempt at an instructable. I hope it helps someone else. Switches and Lights and fans, oh my... I bought a CNC machine some time ago and I was never happy with it. It used a traditional parallel port controller and of..... Listed under: [CNC Machines Projects]

1713.

[Uber Home Automation w/ Arduino & Pi] [EDIT] I created a forum to collaborate on gateway code. http://homeautomation.proboards.com/board/2/openha... A few years ago, I became a dog owner for the first time. I didn't like leaving Cody in the kennel alone all day. I had a webcam on him, but I couldn't watch..... Listed under: [Home Automation Projects]

1714.

[My Portable Pi-Cam] Well, when I say "portable" I wouldn't want to lug it around London on a site-seeing trip. Maybe transportable is a better description. At least I can move it around the garden and film the wildlife. This post provides more technical detail on this system,..... Listed under: [Video - Camera - Imaging Projects]

1715.

[Raspberry Pi Shutdown Button] As everyone at some point will recognise the Raspberry Pi doesn' t include any kind of shutdown button. So the only way to power it off is by unplugging it from the power supply. To make sure you get no corruption of your data files..... Listed under: [Other Projects]

1716.

[Raspberry Pi Universal Remote] In this tutorial I hope to convince you that this is the ultimate universal remote built using a raspberry pi. LIRC is the perfect for this job. It simplifies many of the more difficult tasks that we need to accomplish. Step 1: Parts 1 x..... Listed under: [Sensor - Transducer - Detector Projects]

1717.

[Interface to Wireless Driveway Sensor] I have a driveway that is over 300 feet long and it is nice to have some advance notice that someone is driving or walking in. Previously, I have used a very expensive IR beam-break detector. It gave a lot of false alarms and eventually..... Listed under: [Sensor - Transducer - Detector Projects], [Wireless projects]

1718.

[Making an autonomous boat using a Raspberry Pi (WiP)] The wave of enthusiasm for the Raspberry Pi has driven many people to wonder at the possibilities, and marvel at it's simplicity. The credit card sized SBC is perfect for just about anything. Maybe even for crossing the Atlantic Ocean. FishPi is a project with the goal of..... Listed under: [Game - Entertainment Projects]

1719. [Pulse Oximeter Data Capture with Raspberry Pi] My daughter has some health issues that requires her to be hooked up to a pulse oximeter at night that monitors her oxygen level and heart rate. We have night nurses so we can sleep, but sometimes we wake up at night and want to..... Listed under: [Video - Camera - Imaging Projects]

1720.

[RaspberryPi Pulse Width Modulation Demonstration](#) This instructable is a demonstration of the settings used to control the hardware Pulse Width Modulation (PWM) on a RaspberryPi. If you are just fading an LED the default settings are good enough, but if you are trying to control a servo, a stepping motor,..... Listed under: [PWM Projects](#)

1721.

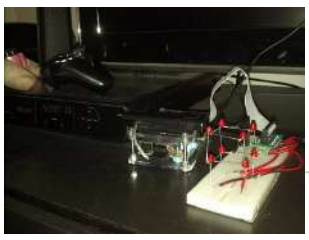
[RaspbAIRy – the RaspberryPi-based Airplay speaker](#) With the delivery of my second RaspberryPi I finally got the chance to start this long-planned project: I wanted to replace my old bathroom radio with a more contemporary device by building a network-enabled speaker. Because I'm a user of several iDevices, the idea of making..... Listed under: [Sound - Audio Projects](#)

1722.

[Robot for the Office](#) Tele-Presence (sort of) robot for the office. Work from home and yet attend the boring meetings. Scare vendors into telling the truth about their products. Chase tiny children when they come to the office for the Hallowe'en or Christmas parties. Step 1: Gather Tools and..... Listed under: [Robotics - Automation Projects](#)

1723.

[IPhone remote controlled lamp](#) This project uses the iPhone and a raspberry pi to remote control the lamp. Both the iPhone and the raspberry pi are connected to the wifi router. The lamp on/off commands are sent from iPhone and received by the raspberry pi embedded system. Then the..... Listed under: [Phone Projects](#)

1724. 

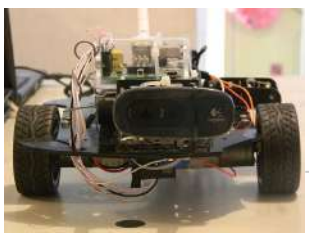
[Raspberry pi – simple 2x2x2 led cube](#) I built this pretty simple 2x2x2 led cube for my raspberry pi, and wanted to share what i learnt. This is my first time using transistors so the circuit is probably not perfect, but it works as i intended it to. Here is what you..... Listed under: [LED Projects](#)

1725.

[Raspberry Pi Web Server — Nginx – PHP – MySql](#) This tutorial will describe how to install and set up a light web server on Raspberry Pi that supports PHP and MySql. Apache is the most widely used server, but Raspberry has limited resources so it is better to opt for a system that uses..... Listed under: [Raspberry Programmer Projects](#)

1726.

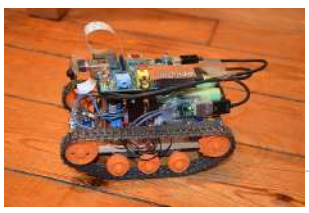
[LiPo to MicroUSB adapter](#) In anticipation of my Raspberry Pi arriving I have created a LiPo (Lithium Polymer) to Micro USB adapter. This adapter converts the power from a 2s – 4s LiPo to a regular 5v. This is then outputted through a Micro USB to be plugged into a..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1727. 

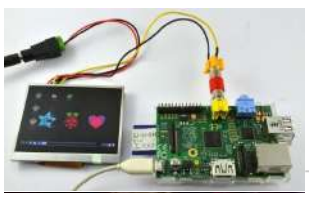
[The RR.O.P. – RaspRobot OpenCV Project](#) FIRST: I used a translator to help me , because I 'm not fluent in English ,I apologize for the bad english . My intention really is to collaborate . SECOND: My thanks to you I got an award in the "MICROCONTROLLER CONTEST SPONSORED BY..... Listed under: [Robotics - Automation Projects](#)

1728.

[PICAXE Raspberry Pi ADC](#) In this instructable I will show you how to use a cheap PICAXE micro-controller as a multiple channel analogue to digital converter. We will be using I2C to access the PICAXE, which will be writing the adc values into the memory registers. The Raspberry Pi..... Listed under: [Development Board - Kits Projects](#)

1729. 

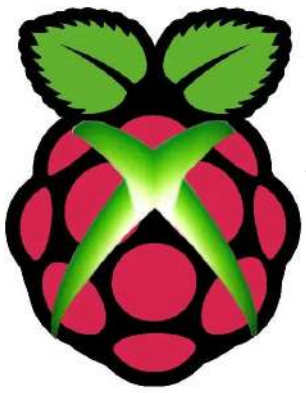
[RaspiRover](#) Hello! I have done a little wifi robot with a Raspberry Pi and other components. Let me present it! Ps: be indulgent, it's my first instructable! Step 1: Things You'll Need You will need: - a Raspberry Pi (35 Eur) - raspberry cam (17,50 Eur)..... Listed under: [Game - Entertainment Projects](#)

1730. 

[Portable raspberry pi (the easy way)](#) Today I will be showing you another project you can do with a raspberry pi. i've seen some people doing this project in a really complex way and i was basically just wasting money on screens and additional components i decided to come up with..... Listed under: [LCD Projects](#)

1731.

External device control (i.e. coffee machine) Note: Try any or all of these at your own risk. I will not be responsible for any issues. Get a professional to help if you are unsure. The concept is that we take a controlling voltage from the computer or a micro-controller, which drives..... Listed under: Home Automation Projects

1732. 

NASBOX314 : make a NAS with xbox360's case and raspberry pi ***update 04.dec.2014*** by syrus77 ****The howto file for system's configuration is now downloadable at below of this page*** ******please comment here if you think i have made a mistake*** Hello from France, I want to share with you my NAS project pi based. I use..... Listed under: Game - Entertainment Projects

1733.

Raspberry Pi powered time lapse dolly (RasPiLapse) Here's my instructable for a home build timelapse dolly. The pro rigs for this are pretty pricey, so I made my own 🙂 Please vote if you like this project! Step 1: Software The heart of this machine is a Raspberry PI, a low cost..... Listed under: Video - Camera - Imaging Projects

1734.

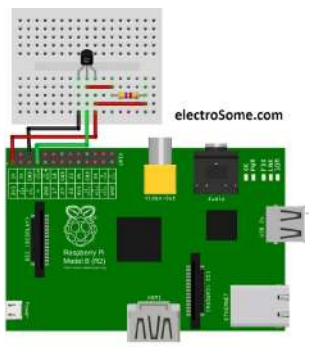
MAMEFrame – The battery-powered MAME system I love MAME . What I don't love is moving MAME cabinets. This project outlines the steps involved with building a MAME cabinet in a controller box, allowing it to be moved or stored. In this project we will build a MAME controller that is..... Listed under: Game - Entertainment Projects

1735.

GPRS/GSM Quadband Module for Arduino and Raspberry Pi Tutorial (SIM900) Introduction Step 1: The shield (hardware) Step 2: Using GSM/GPRS module with AT commands Step 3: Powering the board Step 4: Using the shield in standalone mode - Calls Originating and receiving voice calls Command summary Step 5: Using the shield in standalone mode -..... Listed under: GPS Based Projects

1736.

Record Infrared Codes of Any Remote Control Unit for Usage with Linux Infrared Remote Control (LIRC) on Raspberry Pi Introduction The remote controls that are orphaned when the device they control stopped working are reusable on your Raspberry Pi. After completing this instructable, you may be interested in trying out the following instructables: Reuse Unwanted Remote Control to Shutdown and Reboot Raspberry Pi Reuse..... Listed under: Other Projects

1737. 

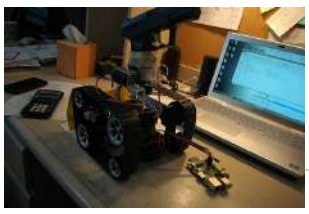
Interfacing DS18B20 Temperature sensor with Raspberry Pi DS18B20 is a commonly used temperature temperature sensor providing 9 bit to 12 bit digital Celsius temperature measurements. The sensor communicates over one wire bus. Each sensor has a 64 bit serial code enabling multiple sensors to be connected to the same one wire bus..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects, Sensor - Transducer - Detector Projects

1738.

NaCade – The Naked Raspberry Pi Arcade Machine The brains of this setup is the Raspberry Pi computer. It's not overly powerful by today's standards but it can run early style games and systems pretty well. It's small size and low power consumption makes it ideal for many different uses. Best of all..... Listed under: Game - Entertainment Projects

1739.

Salvaging Liquid Crystal Displays (LCDs) Almost all electronics have some sort of human interface, from blinking lights and beeping speakers to seven segment alphanumeric and Liquid Crystal Displays. This Instructable is about salvaging and testing Liquid Crystal Displays, and a couple tricks I know to make salvaging them more successful..... Listed under: LCD Projects

1740. 

Counter-Strike Robot DISCLAIMER: Don't do anything silly with this instructables because this is purely for ejudimucation and science. It was November 2013. On Thanksgiving day, my cousin and my brother's friend came over and we were enjoying the break by playing Left 4 Dead and CS:GO. My..... Listed under: Game - Entertainment Projects

1741.

Raspberry Pi Powered Bar-top Arcade Machine I was browsing Instructables when i came across rbates4 and his Raspberry Pi powered arcade machine. http://www.instructables.com/id/Build-your-own-Min... I figured hey I have a spare DVI monitor, an X-arcade stick and a desire to tinker with the Raspberry Pi microcomputer. I am going to have to..... Listed under: Game - Entertainment Projects

1742.

Raspberry Pi Emulator Console for the Backseat Scope of project: After building a Bar-Top Raspberry Pi retro gaming machine I determined that while cool I cant take it around easily as it weighs about 40 lbs and is the size of a large microwave. And while fun for the basement perhaps Arthur..... Listed under: Game - Entertainment Projects

1743.

Fairytale Phone using raspberry pi The Fairytale Phone is one of my first Raspberry Pi Projects I have made. I had already published this on my Blog makerblog.ch, but now this will be a more in depth instruction to build the Phone. The finished phone will be able to play..... Listed under: Phone Projects

1744.

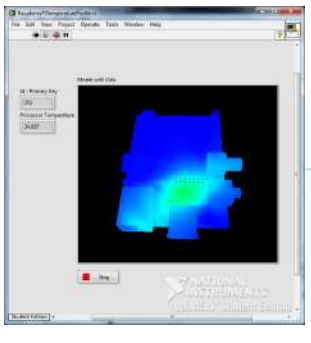
Donkey Kong Bartop Arcade Powered By RPi This New Year's Eve we were in the basement of my friend's house. My 15 year old son and I had brought the 16 inch tall Donkey Kong Bartop Arcade machine we made together to share it. While the kids played the classics for the..... Listed under: Game - Entertainment Projects

1745.

IT – RaspberryPI alarm clock Hello guys In this instructable i'll show an alarm clock project based on RaspberryPi and GrovePi+ Starter Kit. Its name is "IT", that's the shortening of "It's Time". Version instructabled is 1.3, youtube video shows 1.0 . It's a standard alarm clock that can be..... Listed under: Clock - Timer Projects

1746.

16 Channel relay board for your Arduino or Raspberry PI – 24V A general purpose 16 SPDT channel relay board (power supply 24VDC) for switching high-current electrical loads (both AC and DC) siuch as motors, lights, pumps, contactors and more. With this relay board, any logic-level signal from 3V up to 30V can be used to activate..... Listed under: Development Board - Kits Projects

1747. 

Raspberry Pi temperature profile using LabVIEW Connected to my Raspberry Pi is a DS18B20 temperature sensor which I have mounted inside the case roughly above the processor. I wanted to map the temperature profile inside the case and have a visual representation of it. To do this I joined up a Python..... Listed under: Temperature Measurement Projects

1748.

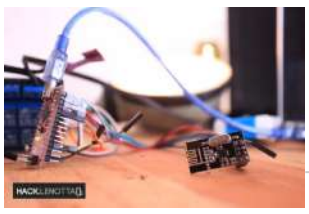
Raspberry pi Controller Automatic Drink Dispensing Robotic Bartender This bartender uses pressurized bottles and solenoid valves controlled by a raspberry pi to dispense the beverages. The user can interact with the GUI on the pi to select their drink of choice, they will be prompted to add any required garnish, then they can..... Listed under: Robotics - Automation Projects

1749.

Measure temperatures with a 1-wire DS18B20 sensor and Raspberry Pi In our article DS18B20 Temperature Sensor with Raspberry Pi we detailed how the Raspberry Pi can be used to take temperature readings from a ds18b20 temperature sensor via the i2c protocol. Here we will expand that article to explain how multiple temperature sensors can be..... Listed under: Temperature Measurement Projects

1750.

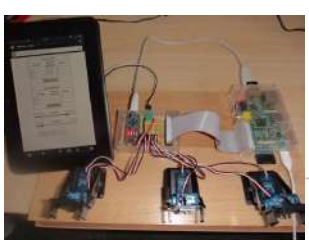
WiFi based home automation by Intel Edison and Banana Pi M1 #IntelIoT#2015HackNTU Hi! People, This is the project I done alone during the period of National Taiwan Univ. Hackthon, since August 21, 2015 to August 23, 2015 in Taipei. I tried to make something could be helpful to those Taiwaness whose age is old. So, I..... Listed under: Home Automation Projects

1751. 

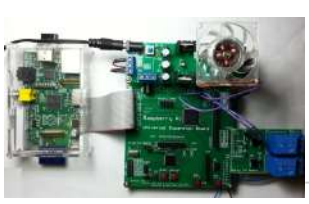
[ARDUINO + RASPBERRY PI] Switching light with NRF24l01+ Hardware: To test the wiring we suggest you to use the ping/pong test you can find in the RF24 libraries (both, of the raspberry and the arduino). Raspberry Pi The connection between the Raspberry Pi and the NRF24l01+ module was a little bit tricky, so..... Listed under: Wireless projects

1752.

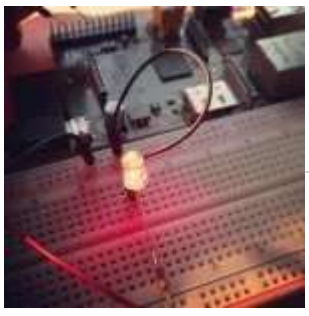
Bluetit Monitor The box is made from scraps of wood I had in the garage. The hole is 25mm and 10cm from the bottom of the box. Internal dimensions are about 12cm by 10cm. The roof is covered with some old bits of lead flashing and the..... Listed under: LED Projects

1753. 

Raspberry Web server sending GET data to Arduino Nano driving 6 servos This is a small project I did for a colleague who is building a 1/48 scale RC model of a Fletcher class Destroyer (yup...that makes the "model" about 8 feet long!) He asked if I could animate the 5 x MKIII 5"/38 gun turrets, complete..... Listed under: Internet - Ethernet - LAN Projects

1754. 

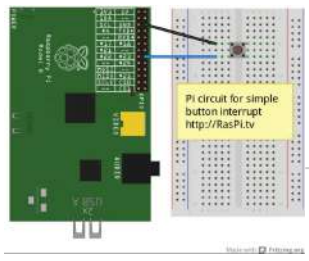
Raspberry Pi with Relay I/O Board Relay I/O Board is widely used in applications of smart home project. In this article, I will detail how to control the Relay I/O board using Raspberry Pi with Raspberry Pi Universal Expansion Board via internet. The codes and schematic diagrams used in this article..... Listed under: Home Automation Projects

1755. 

How To: Control LED using Raspberry PI GPIO In this post I will take you through the fairly simple task of getting your Raspberry PI to control an LED via the GPIO interface, the task is simple however it lays a great foundation of knowledge for any further projects where you want to interface with..... Listed under: LED Projects

1756.

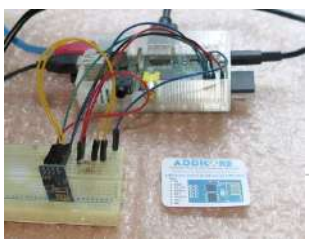
Recessed Wall Mount for Rasberry Pi Google Calendar This 'able takes Piney's "Rasberry Pi Wall Mounted Google Calendar" and shows steps to mount the screen recessed in the wall. I found that any mount - even a low-profile mount - put the monitor too far out into the walking space. Since I wanted..... Listed under: LCD Projects

1757. 

How to use interrupts with Python on the Raspberry Pi and RPi.GPIO The latest big news in the world of Raspberry Pi Python GPIO programming is that Ben Croston has released an update for RPi.GPIO. Why is that a big deal? Because this version has interrupts. “What’s an interrupt?” I hear you say. It’s a way of..... Listed under: How To - DIY - Projects

1758.

Energy Saving in a Convenient Store The basic idea of this project was to turn off a number of lights in a convenient store when the ambient sunlight is sufficient to keep the brightness level above the store's minimum brightness standard. Here's a diagram of the system The main compenents of this..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1759. 

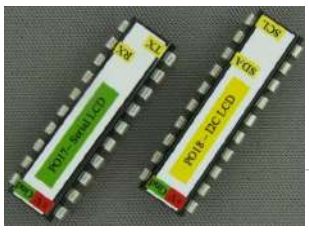
Connect an ESP8266 to your RaspberryPi ESP8266 boards are pretty neat, but if you just bought one (And why wouldn't you for only $5?) and have realized that you don't have any obvious means (3.3V TTL USB serial device) to communicate with it, you can talk to it directly with a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1760. The Raspberry Pi Powered Speaking Doorbell – Part 1: The Input Circuit The first step of building the Raspberry Pi-powered speaking doorbell is building a simple input circuit. The purpose of the input circuit is to protect the Pi from damage by electrically isolating the doorbell and its power supply from the Raspberry Pi itself. The circuit..... Listed under: Home Automation Projects

1761. Raspberry Pi Spy Tank I got a first prize from PI/E day contest. (yaayyy. Thanks for all the awesome voters!!!) I would like to reward the first 10 people to contact me. I have 10 pieces of 3 month PRO membership codes to giveaway. Write a comment to this..... Listed under: Development Board - Kits Projects

1762.
[Electronic circuits for your Raspberry Pi : useful tools](#) f you want to make some simple electronic circuits for your Raspberry Pi, you may need some useful (software and hardware) tools. Hardware tools Breadboard The breadboard (aka prototyping board, or plugboard) allows you to prototype your electronic circuits without the need to solder components..... Listed under: [Development Board - Kits Projects](#)

1763.
[Automatic Reset Switch For Pi](#) In this instructable I describe a method for automatically resetting a Banana Pi when it freezes, or looses power and does not restart. This method will also work for the Raspberry Pi as long as the correct GPIO pins are used (which I believe are..... Listed under: [Development Board - Kits Projects](#)

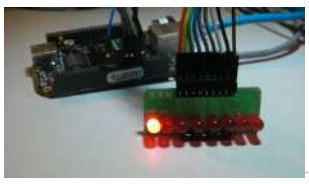
1764. 
[LCD Chip P017(serial) & P018(I2C)](#) Contents Windows Serial Windows I2C Raspberry Pi Serial Raspberry Pi I2C Arduino Mini Project Additional resources FAQ Purchase <Byvac Shop> <eBay shop> This is a 20 pin IC that will take either a serial or I2C input and convert this to suitable signals for a..... Listed under: [LCD Projects](#)

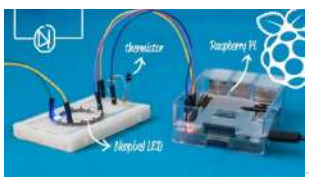
1765.
[Simple home automation. RaspberryPi + Android](#) Control relays connected to you RaspberryPi using Android app. Setup multiple RaspberryPi devices around your house. Single device can operate up to 8 relays and all of them are self-discoverable using lightweight network protocol. No complicated setup. Name each relay, give its type (button, switch)..... Listed under: [Home Automation Projects](#)

1766.
[Pololu DRV8835 Dual Motor Driver Kit for Raspberry Pi B+](#) This compact expansion board plugs directly into the GPIO header on a Raspberry Pi B+ and provides an easy and low-cost solution for driving a pair of small brushed DC motors. Its integrated DRV8835 dual motor driver allows it to operate from 1.5 V to..... Listed under: [Motor Projects](#)

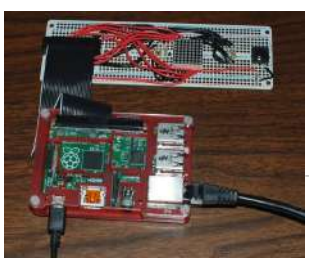
1767.
[Developing the Rogue Pi](#) Developing the Rogue Pi for my final project at BCIT was a great experience. It provided me the opportunity to play around with the Raspberry Pi and build something of valuable use. Instead of copying and pasting my final report into here, I will instead..... Listed under: [Wireless projects](#)

1768.
[Home Automation Raspberry and Phidgets part 2](#) In the previous tutorial we saw how you can drive the digital outputs of the Phidgets 1018 remotely, in this tutorial instead we will check the status of the digital inputs, which can be connected to magnetic contacts, push buttons, switches, etc. You need: a..... Listed under: [Home Automation Projects](#)

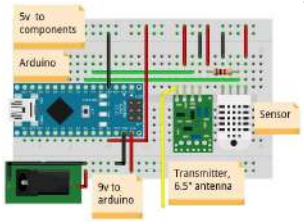
1769. 
[Driving a LED array from a BeagleBone Black](#) Sticking with "BoneScript" in the Cloud 9 IDE, I began by copying the single LED code and generalising it to also flash the next seven pins. I worked out From the same diagram where I found the name "P8_12", that the next few pins on..... Listed under: [LED Projects](#)

1770. 

[Neopixel LED temperature gauge with Raspberry Pi](#) In this tutorial we'll be creating a circular temperature gauge using Adafruit's Neopixel LEDs, a Raspberry Pi and components from Monk Makes Starter Kit! No Arduino required! And to make it even more better, we'll be using Plot.ly to plot the data in real time,..... Listed under: [LED Projects](#)

1771. 
[8×8 LED Matrix for RaspberryPi and 3 programs](#) This is an 8x8 LED matrix for a RaspberryPi, and three programs to run on it: 1 - A "Hello World" program with a complete English font. 2 - A Dice game. 3 - A small 8x8 version of Conway's Game of Life. You will..... Listed under: [LED Projects](#)

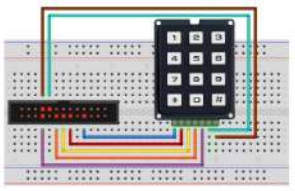
1772. [Building a Wireless Sensor Network in Your Home](#) This tutorial will teach you how to create a network of cost effective, wireless sensor modules. Many of the ready-made wireless modules can be too expensive for use in multiple sensor units. While Wi-Fi and Zigbee modules are popular and easy to use, their cc .. Listed under: [Sensor - Transducer - Detector Projects](#), [Wireless projects](#)



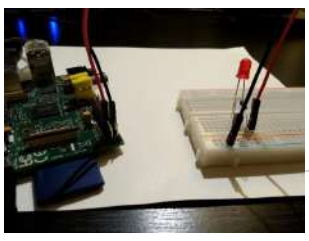
1773. [CALAO Systems Introduces PInBALL Industrial Board Based on Raspberry Pi Compute Module](#) CALAO Systems has just launched an industrial single board computer (SBC) for professional Raspberry Pi developers called PiNBALL or, if you prefer, PAC-1210-S200-B2835-EXX…. The board is powered by the Raspberry Pi Compute Module, features interfaces such as two mini PCIe slots (for USB, I2C, GPIOs,…),…… Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1774. [ClipBoard Communication PC Pi With Python](#) I normally use my Raspberry-Pi on a windows shared desktop. I also share a network drive with the Pi. This is great, but I still have the annoyance of the clipboard on the PC not being reflected on the Pi. There may be cross platform…… Listed under: [Other Projects](#)

1775. [MIPS tempts hackers with Raspberry Pi-like dev board](#) Hard to choose between Raspberry Pi, BeagleBone Black, and MinnowBoard Max? Now there's another choice: the open source MIPS-based "Creator CI20" dev board. In a bid to harness some of the energy and enthusiasm swirling around today's open, hackable single board computers Imagination Technologies, licensor…… Listed under: [Development Board - Kits Projects](#)

1776.  [Raspberry Pi with a keypad matrix](#) Today we will see how to interfacing the Raspberry Pi with a matrix keypad using Rpi-hw library. The library provides the class keypad::matrix↱, defined in "rpi-hw/keypad/matrix.hpp"↱, with which it is possible to manage keypads of any size. Its constructor method takes two ordered lists containing…… Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1777. [PiDroidGPSTracker](#) For the #CUITPHackathon organized at the University of Colorado at Boulder on 11/15/2014, our team built a GPS tracker using a Raspberry Pi and an Android device. Team members: Bhaumik Bhatt, Gavin Joseph, Sanket Nasre and Vishal Nagaonkar. Thanks to Prof. Joe McManus for organizing…… Listed under: [GPS Based Projects](#)

1778.  [Easiest Raspberry Pi GPIO LED Project Ever](#) This will be the easiest Raspberry Pi GPIO LED project ever. If you follow this guide it should take less than 20 minutes to setup and have running. The goal of this project is to get a single LED light blinking based on a Python…… Listed under: [LED Projects](#)

1779. [Reliable Projects 1: WatchDog Timers for Raspberry Pi and Arduinos](#) Reliable Projects 1: WatchDog Timers for Raspberry Pi and Arduinos Summary: In this series of postings we look at how to set up the Raspberry Pi and Arduino internal watchdog timers. We also explain why an external WatchDog Timer, such as the SwitchDoc Labs Dual WatchDog Timer is…… Listed under: [Clock - Timer Projects](#)

1780.

[Pi Power (Remote Power Management with Pi)](#) "Pi Power"!!! Remote Power Management with a Raspberry Pi…… . "Not so long ago in a galaxy far, far away... our hero needed access to data near a distant star in the far off reaches of space" ....no need for "FTL" travel as I was…… Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1781. [Using the Dagu Pan/Tilt Kit with the Raspberry Pi](#) The Pan/Tilt kit that we sell, developed by Dagu with the guys over at Let's Make Robots, is a great way to mount mobile sensors on your robotic projects. In this tutorial we look at how you can control the Pan/Tilt kit with a Raspberry…… Listed under: [Development Board - Kits Projects](#)

1782. [How to build your own Raspberry Pi home alarm system](#) Thanks to RaspberryPi.org for flagging the work of Gadget Nut, who is definitely a Gadet Master, too. They have been working on the PrivateEyePi project, building a DIY Home alarm system. It is modestly described as a simple system that can link to existing door…… Listed under: [Home Automation Projects](#)

1783. [Apple Pi Media Centre](#) Hello there, this is just my step by step on how i made my raspberry pi apple case! in short, it is an apple airport extreme case which i have gutted and replaced the circuit boards with a raspberry pi and a powered usb hub……. Listed under: [Other Projects](#)

1784. [Raspberry Pi Project – A 1960s wallbox interfaced with Sonos](#) The inspiration for this project came from @nivnov pointing me to http://wallbox.weebly.com/. I had somewhat of a different take on the circuitry and software than it's author, Steve Devlin. The pulse train of my Wallbox was also different. This is all explained below. The Wallbox A…… Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

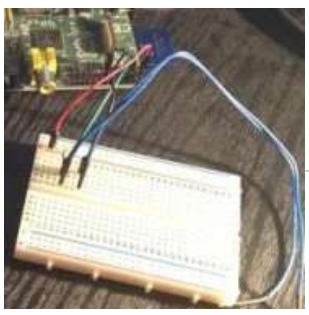
1785. [Make an Internet Controlled Lamp with a Raspberry Pi and Flask](#) Overview Here I will be showing you how to turn on and off a lamp from anywhere in the world. However, you can control any device that works by toggling its power source, such as a fountain, TV, Christmas tree lights, projector, etc. Required Hardware..... Listed under: Internet - Ethernet - LAN Projects

1786.

[Smart Power Outlets](#) These are Raspberry Pi driven smart power outlets. The two power outlets are controlled using a web browser or smart phone. It is also possible to configure the outlets to turn on and off based on the time or room temperature or combinations of time..... Listed under: Blog, Interfacing(USB - RS232 - I2c -ISP) Projects

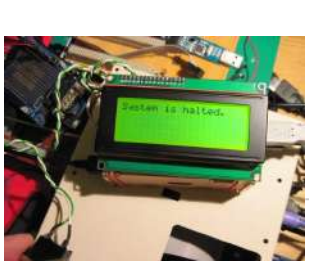
1787.

[Raspberry remote control with Telegram](#) Telegram is a very versatile instant messaging software that can be used with the same phone number on different devices simultaneously. In this tutorial we saw how to install it, and we tried to send text and media messages. We have also seen that it..... Listed under: Wireless projects

1788. 

[How to use Kernel GPIO interrupts on the Raspberry Pi](#) Presumably everyone knows what the Raspberry Pi is, by now, so I'll not start there. You may or may not know that the RasPi has General Purpose Input/Output (GPIO) pins as standard. Some of these provide 3.3v power, some provide 5v power, some are grounded..... Listed under: Development Board - Kits Projects

1789. [Raspberry Pi Robot – Connecting the H-Bridge & Motors](#) For this project we will be using four of the Raspberry Pi's GPIO pins, two per motor. In the diagram below you will see a diagram of a L298N (hopefully yours will look the same or very similar). Each motor will have two wires running from..... Listed under: Motor Projects

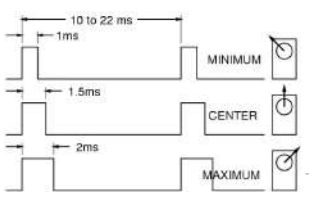
1790. 

[Raspberry Pi, I2C LCD screen and Safe Power Down button](#) The Raspberry Pi, just sitting there, asking to be played with... As I looked over my existing projects I noticed this sad little lone R-Pi sitting on my desk. Some time ago I bought it. Played with it a bit, installed NOOB image on the..... Listed under: LCD Projects

1791. [Raspberry Pi Robot – Flashing LEDs – The Circuit](#) In this brief guide we will show you how to connect up two LEDs to the GPIO ports on your Raspberry Pi and control them via Python Script. From this point onwards I will assume that your Raspberry Pi has a fully working install of Raspbian..... Listed under: LED Projects

1792.

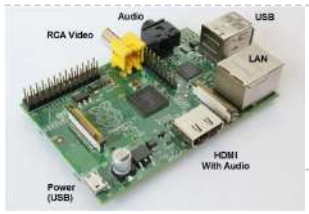
[Build a remotely activated sprinkler using PiFace and Ubidots](#) This is a cool example that teaches you how to use a Raspberry Pi, a PiFace and Ubidots to water your garden from far away. You'll be able to control an electro-valve remotely to water your plants from any place, just using your phone. Step..... Listed under: Development Board - Kits Projects

1793. 

[Controlling a servo using Raspberry Pi and WiringPi software based PWM](#) Controlling a servo using raspberry pi PWM generator is not a trivial task since PWM period cannot be defined by the user. To overcome this issue we will use wiringPi C library in order to create a software generated pulse. Of course the generated pulse..... Listed under: PWM Projects

1794.

Evade georestrictions with the Raspberry Pi In this article I will talk about the use of a professional VPN service called Hide My Ass (I have no affiliation with them). This allows you to send and receive data online while appearing (to everyone else on the Internet) as though you are..... Listed under: Internet - Ethernet - LAN Projects, Wireless projects

1795. 

Arduino weds Raspberry. The "Freeboard" project "If you imagine it's possible, someone else is already trying to doing it, or has already done it." The Installer. This was how I left my musing on the fictitious open source Celestronic M1 chart plotter system. I wasn't aware at the time how extensive the efforts..... Listed under: Development Board - Kits Projects

1796.

Control LED via website Hello! In this project you will learn how to control an LED via your phone or desktop computer threw apache server! Step 1: What are we going to do in this project I've been working with the Raspberry Pi 2 for about a month now,..... Listed under: LED Projects

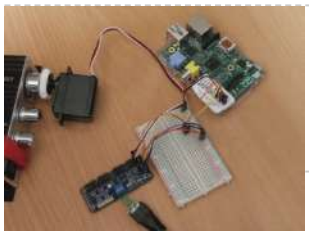
1797.

Child Safety: How to sandbox your children's web traffic cheaply using a Raspberry Pi You can pick up one of these for under £30 Heavy Disclaimer Although the Raspberry Pi described here is super cheap, you will have to have some slightly specialized network equipment to do this. In particular you will need a VLAN aware network switch and..... Listed under: Internet - Ethernet - LAN Projects

1798.

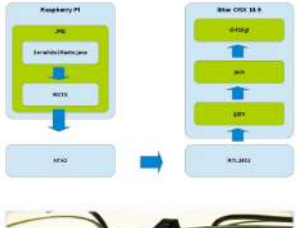
Detecting Lightning with a Raspberry Pi rious methods can be used to detect lightning. Commonly it involves sensing the electromagnetic radiation generated by a strike. Most people have probably heard this at some point as static, crackles, and popping sounds on an AM radio. Some detectors are capable of picking up the flashes of..... Listed under: Sensor - Transducer - Detector Projects

1799.
PC racing set controlled RC car with video streaming Project overview The project aims to equip standard remote control (RC) car with improved control. Commonly used RC car control joystick is replaced with PC racing set. This improvement ensures more precise driving and exceptional user experience. Moreover camera attached to car enables view from perspective..... Listed under: Car Projects

1800. 
Use your Raspberry Pi to move parts of a robot or control anything that can rotate Servos are similar to motors, but can typically only move from 0 to 60/120/180 degrees, rather than rotate continuously. Unlike a motor, you send a servo a signal that makes it go to a specific position (eg 30 degrees), making them ideal for applications such..... Listed under: Robotics - Automation Projects

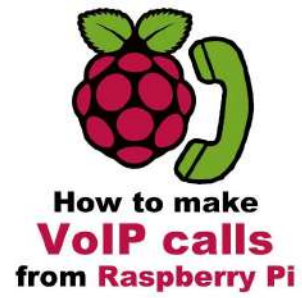
1801.
Construct a wireless switch or motion sensor Project Description This project assumes you already have a Model A or B Raspberry Pi, power supply, HD card, screen, keyboard, network etc. Raspbian Wheezy OS. In this project I will show you how to construct a wireless switch. This project can be..... Listed under: Wireless projects

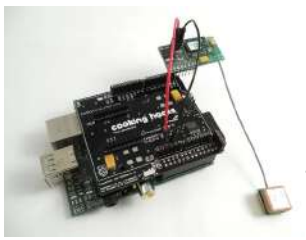
1802.
Installing and running PICPgm on Raspberry Pi Installation Steps The following commands download and install PICPgm on your Raspberry Pi: cd ~ mkdir picpgm_install cd picpgm_install wget http://picpgm.picprojects.net/download/picpgm_v2810.tar.gz tar xzvf picpgm_v2810.tar.gz sudo ./install.sh cp pgmifcfg.xml ~ Note: For PICPgm versions till 2.8.1.0, a copy of pgmifcfg.xml has to be in your home..... Listed under: Other Projects

1803. 
Raspberry Pi + Java + NTX2 Radio Transmitter Introduction For the past 12 months or so after reading about the exploits of Dave Akerman and his first launching of a Raspberry Pi into near space I've been tinkering with the idea of launching a balloon myself. Although there isn't a huge HAB community..... Listed under: Radio Projects

1804.
SNESDev-RPi: A SNES-Adapter for the Raspberry Pi You already might have heard of the Raspberry Pi. It is a credit-card sized PC from the Raspberry Pi Foundation and is going into mass production and distribution these days. There is a huge demand for "the Pi" and the first orders are limited to..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1805. How to make VoIP calls from Raspberry Pi Introduction Have you ever thought about using your Raspberry Pi for VoIP telephony purposes? It sounds interesting, isn't it? If so, but you did not find out yet how to implement this VoIP-SIP solution, this tutorial helps you to achieve your goals. This is the..... Listed under: Raspberry Programmer Projects



1806. 

[GPS Module for Raspberry Pi Tutorial] Ingredients: 1 x Raspberry Pi 1 x GPS shield for Raspberry Pi 1 x Antenna 1 x Two small wires (Red an Black) NOTE: If you don't have a Raspberry Pi you can get one buying a Raspberry Pi Starter Kit. Difficulty: Medium - Preparation..... Listed under: GPS Based Projects

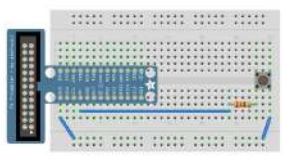
1807. [Electronic drums using a Raspberry Pi and ±200g accelerometers.] Introduction As it was mentioned on my website in my previous article, using accelerometers as drum triggers is deadly easy. So why not pushing it further, and try to develop a full drum kit? A few months have passed since I first had the idea..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1808.

[Design Project: Control a Pan-Tilt Platform with Raspberry Pi and Smartphone] This is purely the design for the projected. Presented is a detailed paper design of a smartphone controlled pan-tilt camera platform for exploring telepresence and POV drone and robot interaction and control. Introduction A pan-tilt platform can be used to position various instruments and tools,..... Listed under: Phone Projects

1809.

[Raspberry Pi Birdbox Camera] Hi there! This is a step-by-step guide to creating a Raspberry Pi Birdbox Camera that features real-time video streaming, motion detection, infra-red LEDs for night vision and has a cheap Power-over-Ethernet solution. I starting making this with my 11 year old son for his Primary..... Listed under: Video - Camera - Imaging Projects

1810. 

[Reading and writing from GPIO ports from Python] This tutorial covers the setup software and hardware to read and write the GPIO pins on a Raspberry Pi running the latest Raspbian operating system. We will showing how to read from a physical push-button from Python code, and control an LED. Related categories: Tutorial..... Listed under: Development Board - Kits Projects

1811.

[PiMiDi: A Raspberry Pi Midi Box, or How I Learned to Stop Worrying and Love MIDI] This is my second instructable on using the Raspberry Pi for digital audio, check out my first instructable for how to set up and control custom audio effects on a Raspberry Pi. If you like them, please vote for me!! If you like messing with..... Listed under: Sound - Audio Projects

1812.

[Durio BASIC + Raspberry Pi B+ (Assembled)] This is a Durio Sound BASIC and Raspberry Pi B+ (Assembled). Includes: • Durio Sound BASIC board x1 • Raspberry Pi B+ x1 • M3 Nylon Screws 5mm x8 • M3 Nylon Standoffs 18mm x4 • 0.1" Jumper x2 * Fully assembled, ready to use!..... Listed under: Sound - Audio Projects

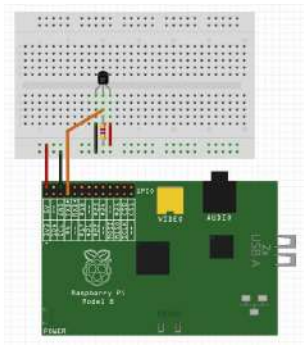
1813.

[Raspberry Pi Network Time Server ~ GpsNtp-Pi] GpsNtp-Pi is a network time server that uses the Network Time Protocol, a GNSS receiver and the Raspberry Pi (RPi) computer platform. It will operate in standalone mode without any other time servers or in pooled mode with other time servers. GpsNtp-Pi can operate with..... Listed under: GPS Based Projects

1814.

[Raspberry Pi Java Tutorial] In this tutorial I will show you how to flash a LED light with Raspberry Pi and Java. This will be a complete step by step tutorial starting with connecting the cables, trough GPIO explanation and finally writing the java code. At the end of this tutorial..... Listed under: LED Projects

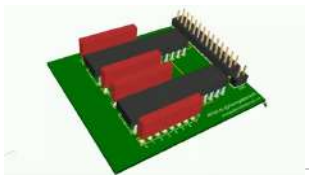
1815. [Raspberry Pi Cheap DIY ATX-Power Switch.] Ok, so it doesn't look like much.... But why would you need one? Well you don't, it is helpful if your pi is powered by a supply that also powers other things. A 3D Printer in my case. Also included is a separate shutdown button..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1816. 

[Warming to the Pi and Python](#) I've had a Raspberry Pi since Christmas, but haven't done much with it up till now. That's all changed since I moved house. Getting to grips with a new central heating system, I find that (for reasons too dull to list here) I need to..... Listed under: [Other Projects](#)

1817.

[Pololu Dual MC33926 Motor Driver for Raspberry Pi (Partial Kit)](#) This add-on board enables a Raspberry Pi B+, A+, or Pi 2 to drive a pair of brushed DC motors. Its dual MC33926 motor drivers operate from 5 V to 28 V and can deliver a continuous 3 A (5 A peak) per motor. The default pin mappings make..... Listed under: [Development Board - Kits Projects](#)

1818. 

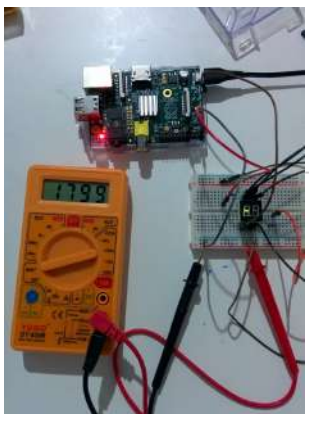
[How To Design a Printed Circuit Board with DesignSpark PCB](#) A couple of months ago I got curious about PCB manufacuring, and ended up using Joe Walnes' open-source PiCrust PCB design to test the process. I sent the 'Gerber' files off to a little cheap board house in China, and a few weeks later my boards..... Listed under: [How To - DIY - Projects](#)

1819.

[Remote Control Autonomous Lawn Mower using RaspberryPi](#) Have you heard of #twitchPlaysPokemon? Well that was some of the inspiration behind this project #googleMowsMyLawn. This project was an idea that my brothers and I had and wanted to do for a little while. When StartFest had a hackathon, we were provided with the..... Listed under: [Robotics - Automation Projects](#)

1820.

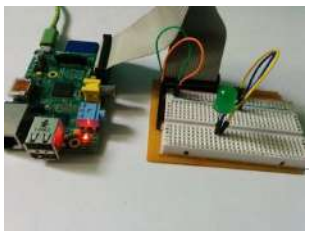
[BMP180 I2C Digital Barometric Pressure Sensor](#) The BMP180 device is a digital barometric pressure sensor. This is available on a small module which provides access to the sensor via the I2C interface. This allows us to easily connect it to the Raspberry Pi with a minimum of wiring. My module is..... Listed under: [Sensor - Transducer - Detector Projects](#)

1821. 

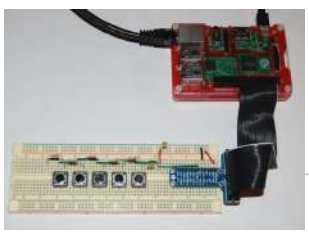
[Driving a 7-segment display with a Raspberry Pi (I)](#) This post will be the first of a series of posts that will describe how to drive a 7-segment display from a Raspberry Pi, without any OS running in it. Today, I will talk about some important characteristics about 7-segment displays, how to wire things..... Listed under: [LED Projects](#)

1822.

[Make Your Own Nokia 5110 Raspberry Pi Add-on Board](#) Who remembers the Nokia 5110? If you're too young to have had one, it was a great phone - a bit of a game changer some might say. The battery lasted a decade, it was tough as nails and one of the first mobiles to..... Listed under: [Phone Projects](#)

1823. 

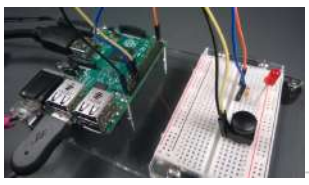
[Raspberry Pi Breadboard Shield](#) Arduino has multiple shields and multiple expansion boards, the shields make prototyping with the Arduino a lot easier. A lot of people design custom shields to match their requirements. But in a raspberry pi has a very few number of shields, and a raspberry pi..... Listed under: [Development Board - Kits Projects](#)

1824. 

[RaspberryPi Multiple Buttons On One Digital Pin](#) If you ever find yourself running out of GPIO pins on a RaspberryPi you can put multiple pushbutton switches on a single pin using this method. It sets a variable by timing the charging of a capacitor through a series of resistors with the switches..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1825.

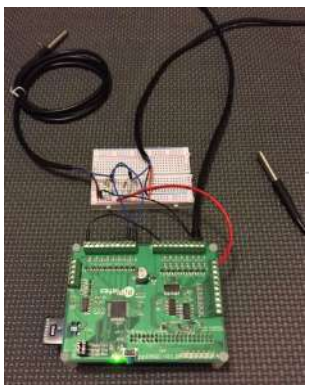
Python based spy robot controlled over Ethernet using Raspberry pi Aim of the project: In this project we have developed a platform to remotely control surveillance robot controlled over Ethernet. It will enable us to monitor the activities in the remote and sensitive areas such as naxalite areas and etc. In traditional security systems, monitoring..... Listed under: Robotics - Automation Projects

1826. 

Push Button Sample In this sample, we connect a push button to your Raspberry Pi 2/MinnowBoard Max and use it to control an LED. We use GPIO interrupts to detect when the button is pressed and toggle the LED in response. This is a headed sample, so please..... Listed under: LED Projects

1827.

Turn a Raspberry Pi into a CCTV Security System A few weeks ago I received the new version of the Nwazet Camera Box Bundle, re-designed to fit the B+ Raspberry Pi. It reminded me that I had promised my dad that I would fit a Pi camera system into his porch so he could..... Listed under: Security - Safety Projects

1828. 

Streaming Sensor Data from a ppDAQC Pi Plate Using InitialState The Pi-PlatesppDAQC Data Acquisition and Control board is an ideal interface between sensors and a Raspberry Pi. With eight analog and eight digital inputs, up to sixteen channels of real world data can be captured by a single ppDAQC Pi-Plate. But, what can you do..... Listed under: Sensor - Transducer - Detector Projects

1829.

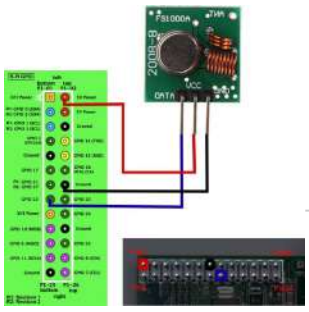
Building a Raspberry Pi Gameboy Why Do This? Quite a while ago I was impressed by the Adafruit guys and their "PiGrrl", a cool looking raspberry pi based Gameboy clone and more: https://learn.adafruit.com/pigrrl-raspberry-pi-gameboy I've always wanted a cool little emulation machine (like Gamepark's GP2X Wiz or the OpenPandora). But they..... Listed under: Game - Entertainment Projects

1830.

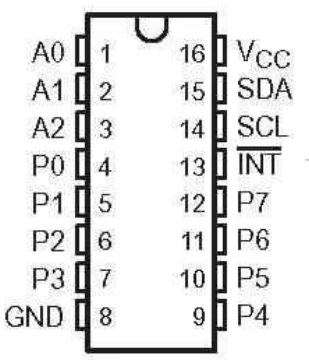
Control outdoor lights that come on automatically when it gets darks What you'll need 1.2 k resistor 2.2 k resistor Light dependent resistor 1 µF capacitor Breadboard and wires You've probably all seen those cheap, solar-powered lamps that you can stick into your garden to try and give it a classy bit of illumination during the night. If..... Listed under: LED Projects

1831.

Build a Speed Camera and Traffic Logger with a Raspberry Pi I've always been interested in connecting things up to computers that they were never designed for. I could reminisce about my first drawing capture arm that used captured the two joint angles with potentiometers and used them to control the pulse width oscillators that fed..... Listed under: Video - Camera - Imaging Projects

1832. 

433MHz Smart Home Controller with Sensorflare and a RaspberryPi In this instructable we show how to use a 433 Mhz transmitter to control your home's RF devices though Sensorflare using a RaspberryPi. Components Required : 433Mhz transmitter module RaspberryPi (any model) Jumper Wires any RF controlled device active account on sensorflare.com Step 1: Setup..... Listed under: Sensor - Transducer - Detector Projects

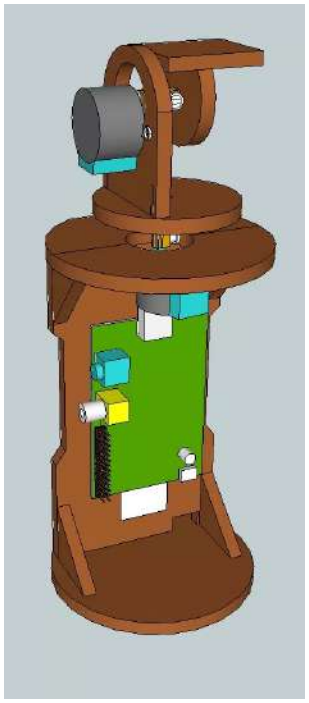
1833. 

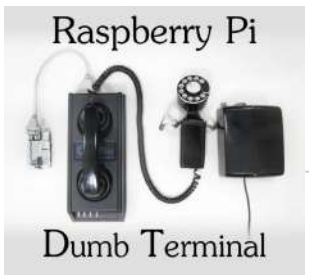
Interfacing a 16×2 LCD with Raspberry Pi Hitachi HD44780 based 16x2 character LCD are very cheap and widely available, and is a essential part for any projects that displays information. Using the I2C bus on Raspberry Pi ,PCF8574 IC, and Python characters/strings can be displayed on the LCD. The PCF8574 is an general..... Listed under: LCD Projects

1834.

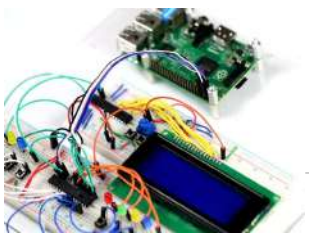
Turn your Raspberry Pi into a portable Wi-Fi streaming radio There are thousands of free radio stations on the internet, and with this project you can listen to all of them from one tiny little box. So let's build our streaming radio using a Raspberry Pi, a speaker and a few odds and ends... What..... Listed under: Radio Projects, Wireless projects

1835. Raspberry Pi DIY Pan Tilt Plans This aims to show the reader how to build a simple Pan tilt mount using readily available stepper motors and other parts. This device automatically moves the camera to pre set angles and at pre set intervals. Raspberry Pi is a trademark of the Raspberry..... Listed under: Video - Camera - Imaging Projects



1836. 

[Raspberry Pi Dumb Terminal](#) Back in my day the internet was a dumb terminal connected at 300 baud through an acoustic coupler to a timeshare system, and we liked it! Ok I'm not actually that old, but how amazing it must have been to be using telephones to connect..... Listed under: [Internet - Ethernet - LAN Projects](#)

1837. 

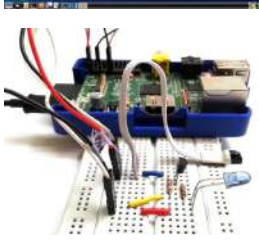
[SmartFaire on Raspberry Pi 2](#) The SmartFaire is a project that uses the I2C bus on a Raspberry Pi 2, and two I/O port expanders to create an interactive game for the user. The game is called "Speed", where the user has to push all the lit buttons, simultaneously, as..... Listed under: [LCD Projects](#)

1838.

[Retransmitting Alarm System State Changes with Raspberry Pi and Arduino](#) I spotted a post by Lior Hass on Hackaday a little while back where he described his Alarmino project where his alarm system now connects with an Arduino and a custom board to simulate the phone line and interpret Contact-ID protocol. He could then get the system..... Listed under: [Clock - Timer Projects](#)

1839.

[The Raspberry Pi and Raspbian](#) In this article by William Harrington, author of the book Leaning Raspbian, we will learn about the Raspberry Pi, the Raspberry Pi Foundation and Raspbian, the official Linux-based operating system of Raspberry Pi. In this article, we will cover: (For more resources related to this topic, see..... Listed under: [Raspberry Programmer Projects](#)

1840. 

[Read emulate remotes with Arduino and Raspberry Pi](#) Remotes are everywhere. They are the interface to your TVs, music systems and what-not. You probably have a few spare ones lying around, devastated at the demise of their better halves. Cheer them up and put them back into use! (Skynet approves...) Here are some..... Listed under: [Wireless projects](#)

1841.

[Raspberry Pi Infrared Game Camera](#) I've just started exploring the Raspberry Pi and was intrigued with the Pi infrared camera module. I live in a somewhat remote area and have seen signs of various wild critters exploring around the house at night. I had an idea of creating a night..... Listed under: [Game - Entertainment Projects](#)

1842.

[How to Enable SPI on your Raspberry Pi](#) What is SPI? SPI stands for Serial Peripheral Interface (SPI). It is made up of 4 wires normally and it was a standard designed by Motorola for use with their microcontrollers. SPI is easy to use and fast. The bus is fully duplex, meaning devices can transmit and receive..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1843.

[Single User Multi Tasking on Raspberry Pi](#) The Raspberry pi is a mini computer which is designed in a single board with all the essential components required for running an operating system. The Raspberry pi board runs on ARM11 processor but is available at extremely cheap price. The board is provided with..... Listed under: [Internet - Ethernet - LAN Projects](#), [LED Projects](#)

1844.

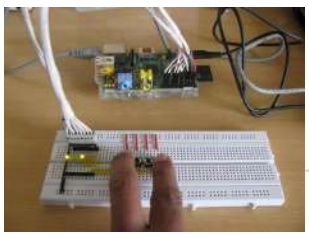
[SainSmart 7 inch 800*480 TFT LCD Touchscreen Display for Raspberry Pi B+/ Pi 2 For Sale](#) SainSmart 7 inch 800*480 TFT LCD Touchscreen Display for Raspberry Pi B+/ Pi 2: $39 Trade_Spotting is a well-known online brand specialized on development board and professional test equipments. As a professional and reliable seller, we source from SainSmart's manufactory directly before testing and packing..... Listed under: [LCD Projects](#)

1845.

Driving a Unipolar Stepper Motor with a ppDAQC Pi Plate Stepper motors are versatile devices that allow precise and repeatable angular control. They are used in disk drives, translation tables, and 3D printers to name just a few applications. They typically come with two different wiring arrangements. The most common arrangement is four wires that..... Listed under: Motor Projects

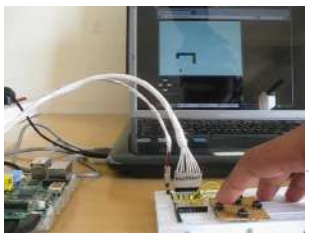
1846.
Instant Photo Printer Instant Photo Printer is an instant camera.But it's not a normal instant camera.It takes a picture when you scream or laugh loudly. Materials: Raspberry pi Power adapter Pi Camera Color printer Sound sensor Step 1: Step 1: Setting up the raspberry pi The very first..... Listed under: Video - Camera - Imaging Projects

1847.
Development Process: Technical Deliverables and Progress Report For the third and final part in this series, I'll focus on discussing the progress the LASS project made up until December 2013, which was the mark of the 75% point of our project. In particular, some of the milestones we acheived were defining the..... Listed under: Other Projects

1848. 
How to Add Sound to Raspberry Pi Game Pad The Raspberry pi is a single board computer that is designed with an aim of providing help in the computer education to students at school. This is a nice platform to try different programming techniques and learn software tools also. The board is provided with..... Listed under: Game - Entertainment Projects

1849. Idiot's Guide to a Raspberry Pi Garage Door Opener It has become apparent that WebIOPi is not yet compatible with the Raspberry Pi v2. If you are following this tutorial, you must be using the first-generation Pi. The link below for the B+ model is still valid, and this model will still work for..... Listed under: Home Automation Projects

1850.
Another (larger) Raspberry Pi Interface Board Here is another somewhat larger interface shown connected to a switch unit and a 16 LED output board. As the Pi connector does not have 20 GPIO pins, three of the pins are shared and can be connected to be either input or output via..... Listed under: Development Board - Kits Projects

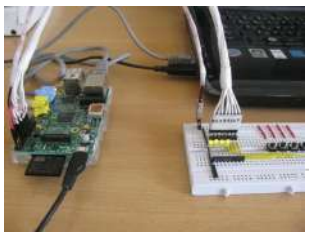
1851. 
Playing Snake Game using Raspberry Pi Game Pad This article discusses about how to develop simple game pad hardware and interface it with the Raspberrypi board and also about the technique of interfacing a game code written in HTML5 with the game pad. Here a Snake game written in HTML5 and JavaScript is..... Listed under: Game - Entertainment Projects

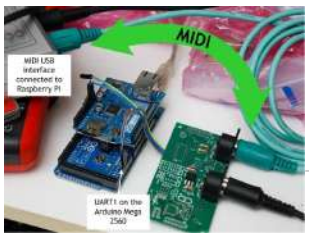
1852.

USB PowerControl for Raspberry Pi and Arduino Within United States: SwitchDoc Labs Store – Powered by Amazon (Now with Amazon Prime!) Outside of United States: Tindie.com The USB PowerControl board is a USB to USB solid state relay. It is is a digitally controlled power switch for your Arduino or Raspberry Pi. It is..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1853.

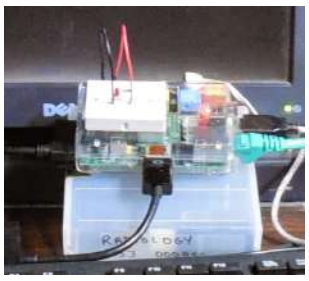
Smart Elex Raspberry PI components review. I recently purchased the smart-elex Raspberry pi GPIO starter kit. I placed the order on Saturday 10t August and it was delivered on the following Tuesday. So following the speedy delivery what did I receive? Kit Includes 1x Smart Elex Pi-Cobbler equivalent GPIO Breakout kit..... Listed under: LED Projects

1854. 
How to Control Hardware using Named Pipe In a Linux operating system all each hardware device is represented as a file. The device can be controlled by simply reading and writing into that file. The hardware of an operating system is on the one side and the user trying to access the..... Listed under: How To - DIY - Projects

1855. 

On USB latency Every so often someone mentions the dreaded USB latency. MIDI is MIDI, and USB is USB, do we need to mix both, and can that work reliably? So let's say we want to provide a Raspberry Pi with some USB MIDI connectivity, and run a..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1856. Raspberry Pi GPIO Pinout I found these awesome Raspberry Pi pinout diagrams by Pighixxx at Flickr. When I am trying to learn something new, I make my own diagrams. I have been doing some reading about safely connecting things to the GPIO pins of the Raspberry Pi, especially regarding..... Listed under: LED Projects

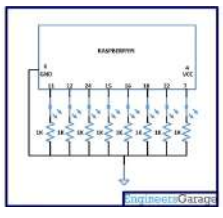


1857.

[Run HummingBoard Raspberry Pi-Like Board is Now Available for $45 and Up](#) HummingBoard is a board made by SolidRun that's mechanically compatible with the Raspberry Pi, and offering the same expansions connectors, and a few extras. The board is comprised of a baseboard and a microSoM powered by Freescale i.MX6 Solo, Dual Lite or Dual. At first..... Listed under: [Development Board - Kits Projects](#)

1858.

[Raspberry Pi Roboat](#) Raspberry pi roboat is an internet controlled water robot using an RC boat as it chassis. This will be use to check an unreachable sewer by giving a live picture stream to the web browser. This thing is also could be another option to learn..... Listed under: [Robotics - Automation Projects](#)

1859. 

[Multitasking on Raspberry Pi using Single C Code](#) The Raspberry pi is a device which uses the Broadcom controller chip which is a SoC (System on Chip). This SoC has the powerful ARM11 processor which runs on 700 MHz at its core. This powerful processor and the controller having the peripherals like timers,..... Listed under: [Development Board - Kits Projects](#)

1860.

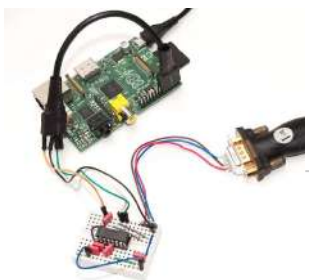
[LabVIEW and Raspberry Pi TCP/IP Communications](#) A few months ago I did the LabVIEW Connectivity course at National Instruments UK. I really enjoyed it but haven't got around to trying any of the concepts out yet. Last week I decided to write a TCP/IP chat program working between LabVIEW running on..... Listed under: [Internet - Ethernet - LAN Projects](#)

1861.

[Remote receiver to Raspberry Pi via GPIO](#) Assalamualaikum, Hi. I would love to share my recent project, connecting an IR receiver to Raspberry Pi's GPIO. Warning! Playing around with Rpi's GPIO is dangerous if you didn't know what you're doing. I'll not hold any responsibility on any failure of your device while..... Listed under: [Wireless projects](#)

1862.

[Raspberry Pi based RFID Music Robot](#) A couple of weeks ago, I saw this really cool Raspberry Pi based RFID-enabled cassette player. It ran PiMusicbox and the maker created a module to control PiMusicbox via RFID. This would be perfect for my three year old daughter. Ok, as she's clearly not..... Listed under: [Robotics - Automation Projects](#)

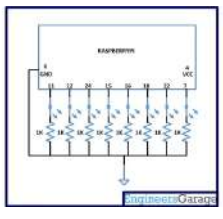
1863. 

[Raspberry Pi Serial Console With MAX3232CPE](#) In addition to the audio, video, network and USB connectors, the Raspberry Pi also has 26 GPIO pins. These pins also include an UART serial console, which can be used to log in to the Pi, and many other things. However, normal UART device communicate..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1864. [The RaspberryPI – Putting Fun Back Into Computing With A Small Price Tag](#) I recently acquired a Raspberry PI Model B. as a new gadget to toy with and I must say I am very impressed with it. I would recommend visiting the project's website at http://www.raspberrypi.org/ for a more in-depth overview but will tell you the premise behind..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1865.

[Cheap and Easy Guide to Building a Private Telephone System](#) Due to the proliferation of cellular networks, most homes have abandoned their land line telephone plan. The infrastructure is still there though, hidden in our walls. Why let all that copper go to waste? Let's talk about how inexpensive and easy it is to reclaim..... Listed under: [Internet - Ethernet - LAN Projects](#)

1866. 

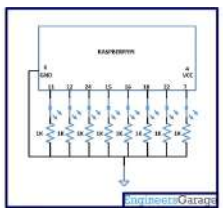
[Parallel Programming using Threads](#) An Operating System requires numerous tasks to be performed at the same time. The 'Parallel Processing' is the term which refers to the technique of executing many tasks at the same time. However actual parallel processing is not possible in commonly available computers, but they..... Listed under: [Raspberry Programmer Projects](#)

1867.

[Power supply for function generator](#) Over the course of developing and testing the function generator I have needed a dual polarity power supply. I have been using a bench power supply that I made some time ago. It has two variable voltage outputs and I am linking the +ve terminal..... Listed under: [Development Board - Kits Projects](#)

1868.

[Interfacing RaspberryPi with DS1307,I2C based Real Time Clock](#) Introduction RaspberryPi, the popular Open Source Hardware Board operating out of different Linux based flavors like Debian, Fedora, Archlinux ARM and Android, does indeed support a Real Time Clock to be integrated in the form of a Hardware module to it. Here, RaspberryPi Foundation gives..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1869. 

[Executing a File using Execve On Raspberry Pi](#) The Raspberry pi board is a mini-computer which runs on ARM11 processor but is available at extremely cheap price. The device uses the Broadcom controller chip which is a SoC (System on Chip). The Raspberrypi is called a mini-computer because the SoC has the powerful..... Listed under: [Raspberry Programmer Projects](#)

1870.

[Praxisberry Pi](#) In this instructable we will make a Raspberry Pi-based music player. Me and some friends made this as a group project for school. Supply list: Raspberry Pi SD Card SD Card reader/writer Speakers Power supply for Raspberry Pi Access to the internet (optional) USB DAC..... Listed under: [Memory - Storage Projects](#)

1871.

[Suptronics X200 Raspberry Pi Model B+ Expansion Board Adds Wi-Fi, RTC, VGA, optical S/PDIF, USB ports, Servo Support, and More](#) The Raspberry Pi is a nice little board, but in some cases you may want to add some extra ports. Suptronics released the X100 expansion board for Raspberry Pi Model B last year, and they've now come up with a little monster called X200 expansion..... Listed under: [Wifi / WLan Projects](#)

1872.

[Waveshare DVK512 Kits For Raspberry Pi Model B+ Include RTC, Sensors, LCD Display, and More](#) Beaglebone (Black) expansion boards are called capes, Minnowboard ones are lures, and Raspberry Pi model B+ add-on boards can be HATs (HArdware on Top). When I found a kit for the Raspberry Pi model B+ on DealExtreme, based on Waveshare DVK512 add-ons board I thought..... Listed under: [LCD Projects](#)

1873.

[Building a Raspberry Pi IRLP Node](#) NOTE - these nodes are no longer on the air. I leave these pages for reference purposes. I have gone to the better world of Allstar. See my development of Allstar on the Beagle Bone Black See my second Pi IRLP node 8891 in Cape..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1874.

[Best Technology Projects of 2012](#) Before the world comes to an abrupt end, I thought it would be pertinent to look back on the last year, and highlight some of my favorite Tech Instructables. Initially, I was going to make this a top 20 list, but with over 5,600 Technology..... Listed under: [Projects](#)

1875.

[Raspberry Pi Model B+ with 4 USB Ports, a micro SD Slot, and More GPIOs Coming Soon](#) With over 3 million boards sold, the Raspberry Pi is by far the most popular ARM Linux board on the market, but people are often asking for hardware upgrades with a faster processor, more RAM and so on. The good news is that a new..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1876.

[Connecting a Raspberry Pi to an old 15Khz Arcade Monitor](#) "The Raspberry Pi has been used all over the world as an excellent emulator box to resuscitate old arcade machines, but with moderate success. You see, if you're a truly arcade aficionado like me, then you'll aim for perfection. And perfection means you'll use the jamma..... Listed under: [How To - DIY - Projects](#)

1877.

[Lego Raspberry Pi Case (for A & B model)](#) Before getting my Raspberry Pi B model in the mail I made up my mind to make a case for it (pretty much a necessity). After looking at many very cool designs, I discovered a girl named Biz over at raspberrypi.org had made a case..... Listed under: [Other Projects](#)

1878.

[A Raspberry Pi Laptop, the easy way.](#) After seeing the brilliant article from the Adafruit Blog describing in detail how to build a Raspberry Pi laptop, I decided I had to have one ! For those that might not have seen the article, take a look here ... Some of the parts are..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1879.

[Module turns Raspberry Pi into robot navigation computer](#) Roboteq launched a Kickstarter project to build an I/O add-in card for robotics navigation that stacks atop a Linux-based Raspberry Pi board. The RIO (Raspberry IO) is based on a 32-bit STM32 microcontroller, and includes a 3A DC/DC converter, several serial interfaces, a CAN interface,..... Listed under: [Robotics - Automation Projects](#)

1880. [How to Make Your Own Smart AC](#) Remember that late-90s Disney Channel Original Movie Smart House in which a young, motherless, computer-genius boy wins a fully automated robot-house, only to have the house-software come alive as an overbearing 50s-esque mother who locks the boy and his family in s 'for their own good'?..... Listed under: [How To - DIY - Projects](#)

1881.

[Monitoring Room Temperatures with a Raspberry Pi and Nagios] Over the past couple months I've been implementing and building out a monitoring solution for our development and production systems. Since nagios is the most loved / hated monitoring solution I felt obliged to learn how it works. After fighting with user permissions, firewall rules,..... Listed under: [Temperature Measurement Projects]

1882.

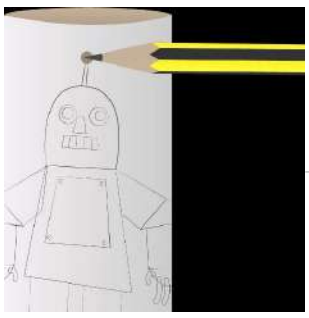
[Mjolnir – The Portable Media Computer] I travel a lot and I like to take my media with me. However, I'm rarely end up at places with a strong internet connection and I don't like having to hook up my laptop to the TV. So a couple months ago I decided..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1883.

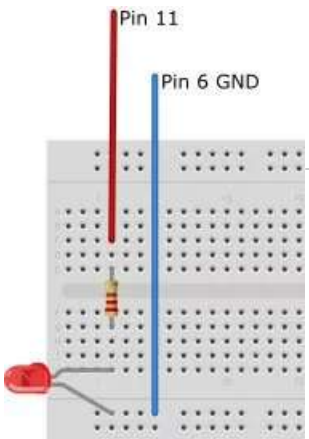
[Raspberry PI connected Wireless Smoke Alarm] My Brief Build a smoke alarm that sends an email and text message when it goes off. The Device After a fe w days of investigation into possible solutions, I opted to build one using a Raspberry PI and a cheap smoke alarm, linked by..... Listed under: [Wireless projects]

1884.

[A Raspberry Pi-based State Poster Project] At our daughter's school, all the 2nd graders put together a "state board" project. They are randomly assigned a state (in our daughter's case, Vermont) and the students work to put together a poster on a tri-fold piece of cardboard. From what I've heard, the..... Listed under: [Other Projects]

1885. 

[Robot Antenna] We are going to make a robot which beeps and has a flashing antenna using a Raspberry Pi. Making an antenna for your robot Let's get hands-on with electronics! This is where the Raspberry Pi comes in handy. You will program a small light called..... Listed under: [Robotics - Automation Projects]

1886. 

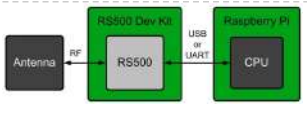
[Scratch & Raspberry Pi GPIO: A Great Combination] A guest post by Les Pounder, a Freelance IT Consultant and Trainer from the UK who is a regular contributor to many Linux magazines and podcasts. You can find out more about him at about.me/lespounder. Scratch, the well known first step into programming, has been..... Listed under: [LED Projects]

1887.

[Raspberry Pi Coffee Table Arcade] Raspberry Pi powered MAME machine in an IKEA coffee table. I probably wouldn't recommend trying to build this unless you have a bit of experience with electronics. This is only a basic run through of how I went about building my Raspberry Pi arcade and..... Listed under: [Blog], [Other Projects]

1888.

[Motor Driver DRV8835 (for Raspberry Pi)] This motor driver kit and its corresponding Python library make it easy to control a pair of bidirectional, brushed DC motors with a Raspberry Pi Model B+. The expansion board features Texas Instruments' DRV8835 dual H-bridge motor driver IC, which allows it to operate from 1.5 V..... Listed under: [Motor Projects]

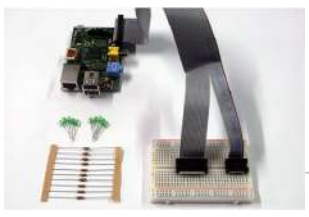
1889. 

[Raspberry Pi IRI Host] We've heard plenty of customers asking if the IRI toolkit can be used on Raspberry Pi, so we decided to put together a blog post about it. The answer is, of course, "Yes it can!" The IRI toolkit has already been ported to the Linux..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

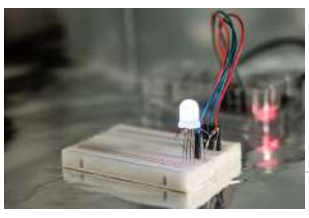
1890.

[Touch free water dispenser with a Raspberry Pi] In this quick project, we'll be using Monk Makes' RaspiRobot board (v2) and a peristaltic pump, to build a sort of touch free water or drink dispenser. Our main component here, the RaspiRobot board, is a brilliant motor shield you can buy for the Raspberry Pi, which plugs..... Listed under: [Security - Safety Projects]

1891. [Raspberry Pi Twitter Candy Bot] Video of all steps at a high level Materials Raspberry Pi (If this is your first time you may also need monitor, keyboard, and mouse) Servo WiFi Adapter or Ethernet cable Wires with female plugs for connecting to Raspberry PiCandyPlastic pop-bottle or similar container. Step..... d under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1892. 

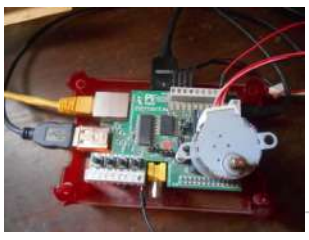
[Using Raspberry Pi GPIO Interface](#) I have a Raspberry Pi - this post is about beginning to explore it's control capabilities using the General Purpose Input Output (GPIO) port and is aimed at total beginners assuming that you have already got your Raspberry Pi up and running as described in..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1893. 

[DNA flashing LED box with a Raspberry Pi](#) How the idea came about... I've been meaning to do a science oriented project with my Raspberry Pi for a while now, but with the existing components at hand, I was rather limited with what I could do. Most of the sensors in the starter..... Listed under: [LED Projects](#)

1894.

[Arduino and Raspberry Pi: We need them in classrooms across the ...](#) It is great being introduced to science and technology at a young age. Do you remember that moment you used a computer for the very first time, or the first time you played Tetris or Snake? How fascinating was that? I have fond memories of..... Listed under: [Development Board - Kits Projects](#)

1895. 

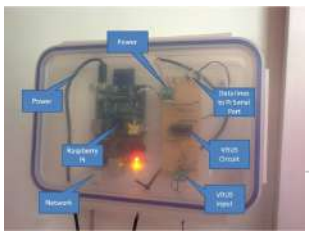
[Controlling a stepper motor with the Raspberry Pi and Piface](#) Updated April 2015 I have made this because I have found no projects using the PiFace. Forum topic at www.raspberrypi.org: http://www.raspberrypi.org/phpBB3/viewtopic.php?f=37&t=54314&p=413902 Here is a simple project that only needs a Raspberry Pi, PiFace, Python, jumper wires, and a stepper motor - that's it! Step 1:..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1896.

[We controlled any AV technique with phone. An IR transceiver for Raspberry](#) On the sly I does the house a little bit more cleverly. At first making control of light with phone by means of a board of the extension of RaZBerry (Z-Wave) for Raspberry, then programming of AVR microcontrollers were fond and collecting the small meteorological..... Listed under: [LED Projects](#)

1897.

[USB Dial Up Modem for Raspberry Pi](#) For the first time in probably 15 years, I find myself needing to use a modem. This time on a Raspberry PI. I have a few old modems in the junk bin, but they need an RS232 serial interface which would be a pain to..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1898. 

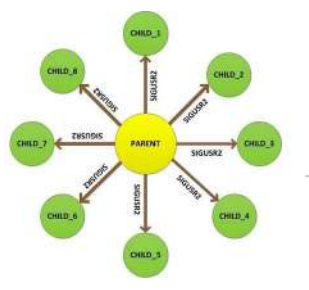
[Home Energy Centre using Raspberry Pi and Nook Simple Touch](#) Introduction Following on from using a Raspberry Pi to capture the electricity consumption of my home, I have over the last 2 years installed Solar Thermal Hot Water panels and very recently Solar PV. This meant that I had an opportunity to create something I..... Listed under: [Home Automation Projects](#)

1899.

[Accessing A Headless Raspberry Pi using SSH and TightVNCServer](#) Scope: To gain access to a terminal on a headless Raspberry Pi and then to display the Pi's desktop remotely using tightvncserver and xtightvncviewer BOM: – WiFi enabled Raspberry Pi with Raspbian OS – WiFi enabled computer on same network as Raspberry Pi. Instructions: To..... Listed under: [Wifi / WLan Projects](#)

1900.

[WebRTC Creeper Drone – Browser Controlled RC Car](#) This is an advanced Instructable, which describes the process of building a drone controlled remotely from a browser. The drone uses an Android phone to stream video and audio back to the browser via WebRTC. Since the software used in this project is somewhat complex,..... Listed under: [Car Projects](#)

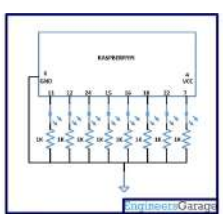
1901. 

[Interprocess Signalling in Raspberry Pi](#) The Raspberrypi is a mini-computer board which is powerful enough to run large operating systems like Linux, Mac and Windows. The Raspberrypi is called a mini-computer because the SoC has the powerful ARM11 processor which runs on 700 MHz at its core and having the..... Listed under: [Internet - Ethernet - LAN Projects](#)

1902. [Home Automation using Raspberry pi and IoT](#) Components Required Raspberry Pi Sensors - Temperature sensor (DS18B20) 8 Channel Relay (12V/ 7A/ 240 V AC) Bulb (60W) Description of components: Raspberry Pi The Raspberry Pi is a credit-card sized computer that can plug into your TV and a keyboard which was found for..... Listed under: [Home Automation Projects](#)

1903.

[Learn How to Use Raspberry Pi GPIO Pins With Scratch] In this tutorial, I'll show you how to install the ScratchGPIO expansion package, how to assemble a breadboard with LEDs and buttons, and run a simple Scratch game that uses the LEDs and breadboard buttons to play. Scratch With the Raspberry Pi's emphasis on education..... Listed under: [Game - Entertainment Projects]

1904. 

[How to use Alarm Signal in Raspberry Pi] A signal is a software interrupt that can be sent to a process which is currently executing in the Operating System. Most of the time the Operating system send signals to the processes automatically and sometimes the user can initiate a signal sending. A process..... Listed under: [Clock - Timer Projects]

1905.

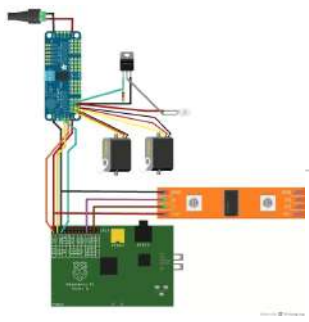
[Minecraft on the Raspberry Pi Model B+] Can you learn with Minecraft? The Raspberry Pi is the ideal platform for learning and there are two great ways to learn coding, and they are physical computing and Minecraft. Physical computing merges the code with electronics to produce all manner of cool projects..... Listed under: [Other Projects]

1906.

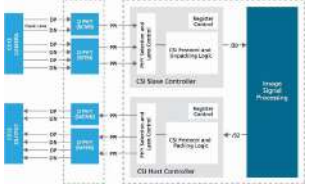
[Raspberry Pi WEMO Control Center] This project provides a webpage and automated interface for controlling Belkin's WEMO light switches and plug switches using the Miranda library. At the end of the project you will have a webpage that can show real time state of all WEMO switches. Clicking the lightbulbs..... Listed under: [Internet - Ethernet - LAN Projects], [LED Projects]

1907.

[Hacker uses Kindle as Raspberry Pi screen] A hacker named Gef has rigged up his Raspberry Pi to use a Kindle e-reader as its monitor. “Hacker” may not quite be the word, actually, as the individual responsible identifies himself as an “eclectic yogi discovering the world of computational art and new media”..... Listed under: [Internet - Ethernet - LAN Projects]

1908. 

[Introducing LightingPi] Features: Control strings of LED pixels with a raspberry Pi Control strings of analog RGB LED strings (up to 16 channels per PWM board) Control Incandessent lighting via SSR boards (work in progress) Control servo position Control of all fixtures provided over all major lighting..... Listed under: [LED Projects]

1909. 

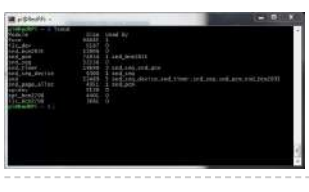
[Fast Development of ISP Algorithms with MIPI IP and FPGA Platform] From smart TVs with gesture control to the high-resolution cameras integrated into today's smartphones to applications boasting multiple cameras, image processing has become a key component in many consumer electronics products. To support the need for more pixels and fast-changing requirements, designers are finding that..... Listed under: [Video - Camera - Imaging Projects]

1910.

[Internet Of Things with Raspberry Pi – 1] When I was new to IOT (Internet Of Things), I saw that there were hardly any tutorials which were simple enough for a beginner to understand and try out. There was either to much technical jargon, or the hardware was too complex. So now that..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

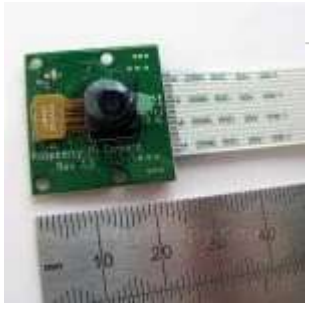
1911.

[Orange Pi Development Boards Are Raspberry Pi Clones] Raspberry Pi - Wikipedia, the free encyclopedia - Orange pi debian sd image | igor pečovnik, Orange pi is a raspberry pi / banana pi clone. it identifies as banana pi so almost everything what works for banana works for orange. i made one special..... Listed under: [Development Board - Kits Projects]

1912. 

[Getting Audio Out Working on the Raspberry Pi] I want to deliver sound from my Raspberry Pi’s (RPi) Audio Output 3.5mm jack. I’ll need to get audio drivers working on Audio Out, and to test it, I’ll need some sound files and players. I’m choosing the Advanced Linux Sound Architecture (ALSA) drivers because its widely supported..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects]

1913. [Raspberry Pi Camera Module Mechanical Dimensions] Having played around with the Pi camera I quickly realised I needed to make some sort of stand for ıe module weighs almost nothing and is tiny so it can be quite hard to keep in one place when you are experimenting. The Raspberry..... Listed under: [Video - Camera - Imaging Projects]



1914.

[Arduino / Raspberry Pi Internet Radio](#) This is a project for Arduino and Raspberry Pi to make an Internet Radio, aimed at intermediate skill level. Some familiarity with Linux usage will be beneficial (or access to someone who can help out if required). Raspberry Pi runs mpd music player daemon to..... Listed under: Blog, Interfacing(USB - RS232 - I2c -ISP) Projects

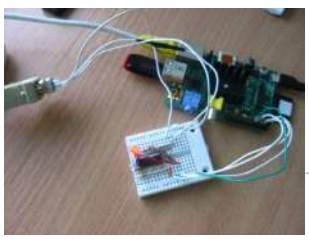
1915.

[ADC Circuit: Raspberry Pi Analog Input Circuit on Breadboard](#) This project shows how to construct a simple MCP3002 Analog-to-Digital Converter (ADC) circuit with a test potentiometer input. It shows how to wire the SPI pins for successful data communication between the ADC and the Raspberry Pi. Breadboard Build A breadboard, or "solderless breadboard", is..... Listed under: Development Board - Kits Projects

1916. [Ultrasonic Distance Measurement Using Python – Part 1](#) LEDs, buzzers and switches are the most common items people attempt to interface to their Raspberry Pi's. Something I found in eBay that is a little bit different is an ultrasonic measurement module. This allows you to measure the distance to the nearest wall or..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1917.

[Camera Platform Electronics](#) As I said in the previous part, I'm not an electrical engineer. I haven't touched any real electronics since school. However, the internet is a wonderful place, and thanks to a number of other sources I was able to figure out how to get the..... Listed under: Video - Camera - Imaging Projects

1918. 

[How to connect Raspberry Pi over Serial Port?](#) Heloooo^^ ! Today i'm gonna show how to connect your rpi with Serial, so you can access it's terminal You need: - Breadboard - Cables - Connectors, so you can attach them to pins - five 0.1 uF capacitors (i used the ceramic ones) -..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1919. [MouseAir Block Diagram – Raspberry Pi](#) Here is the hardware block diagram for MouseAir. MouseAir is a cat toy (fake mice) launching system. It has the ability to read the cat's RFID tag, motion detection as well as ultrasonic detection all controlled remotely from your iPad/iPhone running RasPiConnect. The MouseAir system is..... Listed under: Wireless projects

1920.

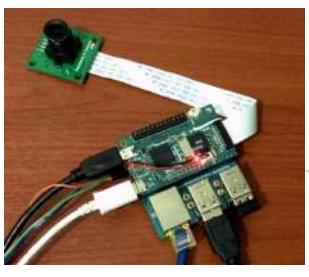
[Recording Sound on the Raspberry Pi](#) The Raspberry Pi does not have a microphone socket, which is inconvenient when you wish to record sound. To fix this you will need a USB Sound Card, for which I bought a Creative Sound Blaster Play! for about £20 and a short USB extension..... Listed under: Sound - Audio Projects

1921.

[Lazarus on Raspberry Pi](#) The Raspberry Pi is a credit-card-sized single-board computer. It has been developed in the UK by the Raspberry Pi Foundation with the intention of stimulating the teaching of basic computer science in schools. Raspberry Pis are also used for multiple other purposes that are as..... Listed under: Development Board - Kits Projects

1922.

[Making Fun | PiLarm: How to Build a Raspberry Pi Room Alarm](#) I'm always on the lookout for those teachable moments. Inspiration struck me when my 5-year-old asked for help in keeping his little brother from sneaking into his room. I spotted the perfect time to teach him about inputs, outputs, and programming. Learning is easier when..... Listed under: Home Automation Projects

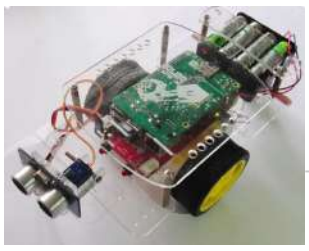
1923. 

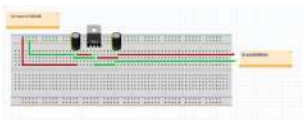
[Raspberry Pi Video Streaming](#) This instructable will show how to stream a Raspicam to a web using a Raspberry Pi and the UV4L driver. Step 1: Material - Raspberry Pi or Odroid-W Running Raspbian - Raspicam - Router - Ethernet Cable Step 2: Enable Raspicam Before starting to configure..... Listed under: Video - Camera - Imaging Projects

1924.
Line follower robot using 8051. Line follower robots were one of the earliest automatic guided robots. They are able to follow a line marked on a contrasting background, usually a black line on a white surface or a white line on a black surface. Usually the line follower robot works..... Listed under: Robotics - Automation Projects

1925.

DiddyBorg: The Mini 6 wheeled Raspberry Pi Robot! DiddyBorg is our robust robot kit for the Raspberry Pi. He can be controlled via autonomous software, via a Bluetooth controller such as the PS3 or over Wifi through a keyboard. Check out this video of him rolling around! This Instructables is concerned with the..... Listed under: Robotics - Automation Projects

1926. 
Give Your Raspberry Pi Robot a Worm Brain The C Elegans worm is one of the most-studied animals in science. In neurobiology, it's the most basic brain model scientists use to study how the brain works. Now you can have a robot that thinks like one! The C Elegans worm brain has been..... Listed under: Car Projects

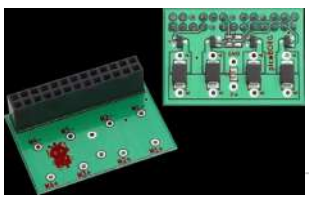
1927. 
Powering a Raspberry Pi from 12 V DC I new to electronic engineering and am trying to learn electronic engineering by creating little projects. I have a few questions about powering my Raspberry Pi (5 V DC @1000 mA) from a 12 V DC 1000 mA power supply. The 12 V power supply will provide power to the..... Listed under: Other Projects

1928.

Host your Smartphone App on your Raspberry Pi! Background: I'm currently working on a Sencha Touch project making an Entrepreneur application, which will be released in a couple of months... Stay tuned! I only want say that it is a bit more complex than this example... but you have to start with something, right?!..... Listed under: Phone Projects

1929.
Twitter to Teletype The Museum of Computing in Swindon has a working Teletype and a desire to get it to print out tweets as part of a display in the museum. Since the Swindon Hackspace is based in the museum it was a perfect project for hackspace members..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1930.
Laser Cut Raspberry Pi LCD Case I wanted a decent size portable display for my Raspberry Pi's that I could easily pack up and take to work, friend's houses, gatherings, and Tech Shop. I bought an inexpensive 10.1" LCD display from eBay and using a laser cutter, 1/8" birch plywood, 1/16"..... Listed under: Other Projects

1931. 
PicoBorg – Control small motors from your Raspberry Pi ith PicoBorg, you can turn on and off fans, motors, solenoids, relays etc. from your Raspberry Pi. There are 4 low side drivers so you can turn on and off 4 devices One is connected to the RPi PWM pin, so you can vary duty..... Listed under: Motor Projects

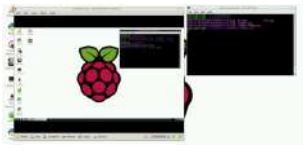
1932.

Host your website on Raspberry pi Raspberry pi is a low cost development board by the raspberry foundation,for this tutorial i am using the distro provided by adafruit that can be found at http://learn.adafruit.com/adafruit-raspberry-pi-educational-linux-distro/occidentalis-v0-dot-2 all you need to do is download the image and use WIN32 disk to burn the image on to the..... Listed under: Internet - Ethernet - LAN Projects

1933.
Raspberry Pi Wifi Internet Radio Player For my first project after getting the Raspberry Pi ($35 Linux computer) I wanted to extend on a very good blog post I read from MightyOhm about turning a cheap Wifi router into an internet radio: http://mightyohm.com/blog/2008/10/building-a-wifi-radio-part-1-introduction/ In that article he also had a cheap..... Listed under: Radio Projects

1934.
3d Printed Raspberry Pi Security Camera Update: If you like my instructable please vote for me in the Raspberry Pi and Epilog challenge. I will also update the 5th step to include how I setup Motion on the first boot. Thank you for your clicks and thank you Instructable.com for the..... Listed under: Security - Safety Projects

1935.
Python – Traffic Light Introduction Hopefully now you have received your LED electronics kit and have followed our basic LED tutorials. Now you are eagly wating to get started and create some more complex programming using both inputs and outputs. The following tutorial will get you programming your first..... Listed under: LED Projects

1936. 
Raspberry Pi Screenshots Learn how to capture and view screenshots on your Raspberry Pi for project documentation. Use Scrot and ShotWell to do this solely through the command line. Scrot is a command line screen capturing application that's easy to download and use, and Shotwell is a light-weight..... Listed under: Interfacing(USB - RS232 - I2c -ISP) Projects

1937. A Better Mobile Display for the Raspberry Pi As I described in an earlier post, I run my Raspberry Pi (RPi) as a headless system, using Cygwin/X's xterm for command line interaction with the RPi, with my PC being my X server to support any X Window applications. I can move files between the PC and the RPi..... Listed under: Phone Projects

1938.

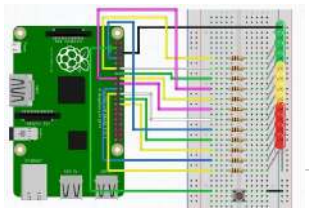
[How to use the ADXL345 on Raspberry pi](#) I have found that there is not much out there to actually find out how to use the ADXL345 on the web, but first, what is an ADXL345, well it is a 3-axis accelerometer with high resolution (13-bit) measurement at up to ±16 g. Digital..... Listed under: [Development Board - Kits Projects](#)

1939.

[Simple Raspberry Pi Game Pad for Ball Catching Game](#) There are eight general purpose IO pins on the 13*2 pin connectors of the Raspberrypi board and among them four pins has been selected as input and then remaining four pins as output. The input pins are connected to push button and are pulled down..... Listed under: [Game - Entertainment Projects](#)

1940.

[Raspberry Pi Ball tracking](#) (Note: This is an advanced tutorial, it is not intended for a linux beginner.) In this tutorial, I will demonstrate how to track table tennis balls using OpenCV on Raspberry Pi. It can be used to track any circular object as long as it can..... Listed under: [Sensor - Transducer - Detector Projects](#)

1941. 

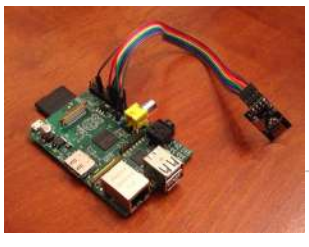
[The Ladder Game- Hardware emulated in Python and C](#) Prerequisites: Basic Raspberry setup step by step Refreshing the Software of the Raspberry Pi Hardware: Breadboard and Jumper cables or soldering equipment 12 LEDs of any color and fitting resistors 1 Pushbutton The ladder game is a good..... Listed under: [Game - Entertainment Projects](#)

1942.

[RPI: Use GPIO pins and a program to determine TTL gates](#) Lab Outline Download WiringPi libraries Understand the pin layout for the RPI Understand why you must use a voltage converter in this lab, and how to use it Create a program to determine the type of TTL gate being tested DUE BY NEXT LAB Wiring..... Listed under: [Other Projects](#)

1943.

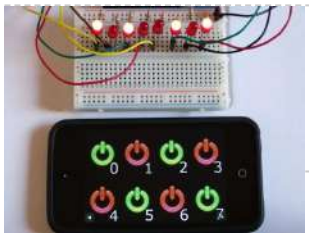
[Making Things Interactive](#) Vicious Cycle – Final Documentation 'Vicious Cycle' is a machine that 'promotes' health and active lifestyle through a portion-controlled diet. Today's obsession with insane workout routines and different types of diets (whether it be no carbs, Paleo, raw food, or an-apple-a-day diet – you name..... Listed under: [How To - DIY - Projects](#)

1944. 

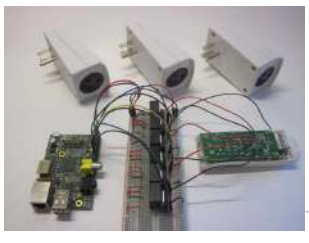
[Home Automation Framework](#) I. Title and Abstract The Home Automation Framework provides a web interface that allows users to control devices in their home using the browser on a smartphone, tablet, or PC. So far, the system allows for powering outlets on and off, locking and unlocking a..... Listed under: [Home Automation Projects](#)

1945.

[Raspberry Pi Digital Signage: Exchange Rate Display Boards](#) Raspberry Pi (Model B) is a single-board computer that uses an ARM 11 (ARM1176JZF-S core) processor running at 700MHz (it can overclock up to 1GHz) with 512MB RAM. This article shows you how to turn your Raspberry Pi into a cheap, browser based digital signage..... Listed under: [Development Board - Kits Projects](#)

1946. 

[Simple and intuitive web interface for your Raspberry Pi](#) The Raspberry Pi is an amazing 35 dollars mini-computer. It allows you to do everything you could do with a regular Linux computer (Connecting to the internet, watching videos, launching applications, ...) but also to interact with the world surrounding it, just like an Arduino..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1947. 

[Wireless Multi-Channel Voice-Controlled Electrical Outlets](#) This project is a combination of several difference resources: My single-outlet control project with Raspberry Pi and Python, originally inspired by user wilq44's Raspberry Pi GPIO home automation WiringPi, software written by Gordon Henderson that allows "Arduino style" control of the GPIO pins from the..... Listed under: [Radio Projects](#), [Sound - Audio Projects](#)

1948.

[Raspberry Pi as Hi-Fi player with RuneAudio](#) This Instructable will show you how to turn your Raspberry Pi in a Hi-Fi music player with surprising sound quality when used in combination with an USB DAC. We are going to introduce here RuneAudio, a free and open source software that we developed to..... Listed under: [Ideas](#)

1949.

[WeggUp – A sleeping cycle and light alarm clock](#) I often have the problem, that I have trouble getting up in the morning, while at the same time, I have trouble falling asleep in the night. I've checked out several possibilities to make both easier. Getting up in the morning Sunrise alarm / light..... Listed under: [Clock - Timer Projects](#)

1950.

[Black Box Timelapse](#) Black Box Timelapse is a simultaneous timelapse recorder and player, which I built using a Raspberry Pi. It is battery-operated and so I can bring it to different places and set it up. Why not use an iPhone? Simple: the iPhone looks like a device..... Listed under: [Game - Entertainment Projects](#)

1951.

[ISPRESSO: Remote Controlled, Raspberry Pi Powered Espresso Machine](#) iSPRESSO is an appliance modification comprised of Raspberry Pi computer, solid state relays, temp sensor, buttons and a display, a custom Printed Circuit Board, and custom linux shell scripts and a good bit of python code. iSPRESSO features: Programmable software PID Controller for precise boiler..... Listed under: [CNC Machines Projects](#)

1952.

[Playstation 2 controller with Raspberry Pi](#) This tutorial will show how to use the Playstation 2 Controller (PS2) with the Raspberry Pi. We use the Arduberry to adapt the shield to the Raspberry Pi. Step 1: Hardware Required Raspberry Pi Arduberry Dexter Industries Playstation 2 Controller Shield for Arduino A Playstation..... Listed under: [Game - Entertainment Projects](#)

1953.

[Raspberry Pi – SMS Garage Door Butler](#) Most Raspberry Pi garage door remotes had open ports, or other features I wasn't too fond of. So I created my own that contains much more security, logging of who opens the garage, video capture, garage status and more. Features: 100% secure garage door operation,..... Listed under: [Phone Projects](#)

1954.

[Mini Projection-Mapped Landscape](#) This Instructable about creating a simple sculpture that is augmented with projection mapping, designed to run on the Raspberry Pi, built with OpenFrameworks. Projection Mapping is a process that relies on knowledge of the physical space, graphics software, and installation of the hardware necessary to..... Listed under: [Ideas](#)

1955.

[DIY Head Mounted Display](#) In this instructable I will show you how to make a DIY head mounted display (HMD) that uses a raspberry pi and a 7 inch composite or HDMI display. UPDATE: 20 000 views! Please vote for this project in the Formlabs contest, if I won..... Listed under: [Ideas](#)

1956.

[Pumpkin PACS/Pumpkin Pi](#) The Pumpkin PACS was constructed for the MGH Radiology Pumpkin Decorating Contest. It is a standalone DICOM workstation capable of displaying many standard types of radiology images. The pumpkin contains a Raspberry Pi which projects images onto a screen using a Microvision SHOWWX+ HDMI pico projector..... Listed under: [Game - Entertainment Projects](#)

1957.

[Overclocking a Raspberry Pi](#) In this instructables I will show you how to overclock a Raspberry Pi. You don't need a heat sink or a fan, because the temperautre won't go over the 50-60 C (120-140 F). Please vote for me in the Raspberry Pi contest. Good luck with..... Listed under: [Clock - Timer Projects](#)

1958.

[Piano Stairs with Arduino and Raspberry Pi](#) Who doesn't love music? These Piano Stairs are an interactive, relatively portable, musical installation that can be applied to basically any stairwell. I built them for HackPrinceton along with my friends Erica Portnoy and Vincent Castaneda, and we won 2nd place in the hardware track..... Listed under: [Game - Entertainment Projects](#), [Sound - Audio Projects](#)

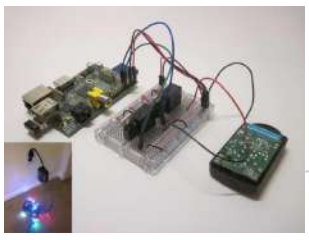
1959.

[Simple timelapse camera using Raspberry Pi and a coffee tin](#) Whilst developing BerryCam I thought it would be pretty cool to create a timelapse camera that could be left outdoors over a period of time, to capture a sequence of images that could be later joined together into a video clip. From the outset thoughts..... Listed under: [Video - Camera - Imaging Projects](#)

1960. [Raspberry Pi Multi-Room Audio (Mobile/Tablet/PC Controlled)](#) I have been lurking on Instructables for a few years but have never posted one myself. Now I have bought a home of my own it's time to undergo some projects and share them with the community. In my first project I'm going to show..... Listed under: [Sound - Audio Projects](#)

1961.

[Raspberry Pi as low-cost HD surveillance camera](#) This instructable describes how to build a surveillance cam based on a Raspberry Pi micro-computer which records HD video when something moves in the monitored area. Live picture can be viewed from any web browser, even from your mobile while you're on the road. What..... Listed under: [Video - Camera - Imaging Projects](#)

1962. 

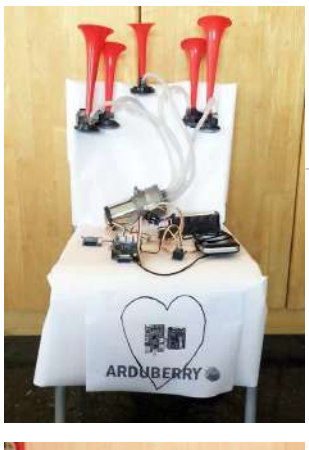
[Wireless Christmas Light Timer with Raspberry Pi and Python](#) Update 1/14/2014: Thanks to everyone who voted for this project in the Hardware Hacking Contest! Looking forward to my new maker pen. Update 12/31/2013: looking for a more advanced version of this project? Check out my new multi-channel voice-controlled version. We all know you could..... Listed under: [LED Projects](#)

1963.

[Raspberry Pi Temperature & Humidity Network Monitor](#) OK, Instructables is really having some strange issues, Once again the Intro disappeared, now the history is gone, and I've had to recreate the Intro from a PDF download. I had some issues with Kingston SD Cards, but the SanDisk cards I'm using now have..... Listed under: [Temperature Measurement Projects](#)

1964.

[Raspberry Pi Rain Box](#) I find the sound of rain really soothing, and wanted a device to just play rain sounds for me. I figured the Raspberry Pi would be perfect for this. So I wrote a Python script that selects a random number, and, based on the number,..... Listed under: [Game - Entertainment Projects](#), [Robotics - Automation Projects](#)

1965. 

[The Airhorn Celebration Project](#) This project combines the Raspberry Pi, Arduberry and a huge set of Air Horns to alert us whenever we have a new backer on Kickstarter. We recently launched the Arduberry on Kickstarter which brings a seamless experience to Raspberry Pi by providing a very simple..... Listed under: [Game - Entertainment Projects](#)

1966.

[Raspberry PI Autobot Transformer (Non-Transformable)](#) Wish that the Autobot Blaster Transformer could play music when you were a kid? Well now you can with this Instructable!ABSOLUTELY NO PROGRAMMING SKILLS NECESSARY :)This Instructable shows you how to create a Classic Boombox with a Raspberry Pi. The model that is being used..... Listed under: [Robotics - Automation Projects](#)

1967.

[Lego + Sugru Panel Mount Connectors (with RetroPie case as example)](#) The motivation for this project came when I combined my Raspberry Pi voice-controlled electrical outlets with a RetroPie. Due to the number of peripherals and cables involved (a powered USB hub, microphone, two USB controllers, breadboard, wireless remote, plus the normal HDMI and power cables..... Listed under: [Game - Entertainment Projects](#), [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1968.

[Mounting a USB Thumb Drive with the Raspberry Pi](#) This is another one of my "meat-and-potatoes" Raspberry Pi Instructables. What this Instructable will show you how to do is to configure your Raspberry Pi to recognize and automatically mount a USB thumb drive. This is especially useful for exchanging files, running backups and using..... Listed under: [Interfacing(USB - RS232 - I2c -ISP) Projects](#)

1969.

[Noodle: a crowdsourced robot](#) Noodle is a small device with the I/O of a machine but the thoughts and feelings of a human. You can program it to monitor your physical space and react to changes in the environment with words, images, sounds and decisions. For example, you could..... Listed under: [Robotics - Automation Projects](#)

1970. [Build your own Mini Arcade Cabinet with Raspberry Pi](#) The Porta-Pi Mini Arcade is a desktop-sized, fully functional, mini arcade cabinet measuring just under 13 x 9 x 10 inches (HxWxD). This Porta-Pi Arcade turns your Raspberry Pi in a mini arcade machine. Of course you could stuff any other retro console inside, but..... Listed under: [Ideas](#)

1971. SelfiesBot — Twitterbot that takes Selfies using Rapsberry Pi SelfiesBot is a Twitterbot that takes...Selfies! The Twitter feed for @selfiesbot is here. SelfiesBot is a sculpture that uses a Raspberry Pi to take a photo, preview it and then post it to its Twitter account. This Instructable will give details of the software, electronics..... Listed under: Raspberry Programmer Projects

1972.

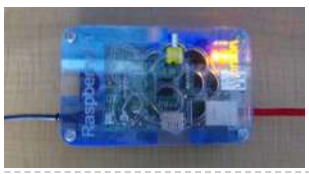
RFID Sound Triggers with the Raspberry Pi During the two day 'hackathon' style workshop at Makernow last week, part of the All Makers Now conference, I helped one of the groups realise their project that involved triggering sound samples when symbolic items were placed into the centre of the piece. Due to..... Listed under: RFID - NFC Projects

1973.

Twin Raspberry Pi B+ Rack "Case" So I have built and bought several Raspberry Pi cases. Before I could get a RasPi I owned several high quality paper cases. Once it came out I graduated to cardboard, leather, Legos, and purchased cases. I would buy a Pi and create or buy..... Listed under: Ideas

1974.

Raspberry Pi in Rotary Phone I found an old Western Electric rotary phone in my attic. It's really an amazing piece of hardware. It seems to work fine several decades after its construction despite whatever abuse it took before ending up in my attic. However, I don't currently need a..... Listed under: Phone Projects

1975. 

Raspberry Pi Web Server Hi there, This is my first Instructable so all criticisms and comments are welcome. This will show you how to set up a simple wired web server on your Raspberry Pi, with PHP and MySql. The Raspberry Pi is a good choice for a webserver..... Listed under: Internet - Ethernet - LAN Projects

1976.

Internet Photo Frame Unlike most commercial frames, this digital picture frame connects to Flickr, allowing you to add and remove photos without a physical storage device, such as USB stick or SD card. A Raspberry Pi hidden inside the TV connects to the internet and automatically updates the..... Listed under: Internet - Ethernet - LAN Projects

1977.

Getting Stock Prices on Raspberry Pi (using Python) I'm working on some new projects involving getting stock price data from the web, which will be tracked and displayed via my Raspberry Pi. I wanted to share the setup on how to do this using Python. This short Instructable will show you how install..... Listed under: Internet - Ethernet - LAN Projects

1978.

Tweeting Bird Feeder This Summer my 5 year old son and I wanted to work on a project that would be fun, educational, and related to nature. While enjoying a beautiful Colorado summer evening on Grandpa and Grandma's deck watching all of the hummingbirds fight over 6 spots..... Listed under: Game - Entertainment Projects

1979.

PiStation – A Raspberry Pi Emulation Console I'm moving and will no longer have room for all my classic systems like my NES, SNES, Genesis, etc, so the first thing I think is that I can just play the games on emulators on my PC. But still, I love the experience of..... Listed under: Game - Entertainment Projects

1980.

Easy $10 Copper Raspberry Pi Case I wanted to make a nice case for my Raspberry Pi that anyone could easily build using common hand tools and easy to find, cheap materials. The total cost of material was about $10. The only tools that are needed are a pair of tin..... Listed under: Ideas

1981.

2-Player Bartop Arcade Machine (Powered by Pi) The 'Galactic Starcade' is a DIY retro bartop arcade cabinet for two players. It is powered by the Raspberry Pi micro-computer and plays multiple types of retro games - primarily NES, SNES, Megadrive and arcade (MAME) games. Using a Pi keeps the cost, weight and..... Listed under: Game - Entertainment Projects

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