

Raspberry PI projects home automation PDF offline download

Home automation or domotics is building automation for a home, called a smart home or smart house. A home automation system will control lighting, climate, entertainment systems, and appliances. It may also include home security such as access control and alarm systems. When connected with the Internet, home devices are an important constituent of the Internet of Things.

Home automation interface / connectivity:

A home automation system typically connects controlled devices to a central hub or "gateway". The user interface for control of the system uses either wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a Web interface, that may also be accessible off-site through the Internet.

Home Automation Projects List using Raspberry PI Module:

This is the list of projects using Raspberry PI, all of these projects covers a part or complete project with various small modules covering security, monitoring of smart home.



Automatic Vehicle Accident Alert System using AWS IoT Introduction According to the Top 10 Causes of Death Report by CDC, Road Injuries hit in several country including my country, Thailand that 4 percent of death is a result...



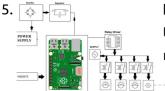
AlexaPi MQTT Smart Hub AlexaPi MQTT Smart Hub, cheap and easy to use smart hub for DIY home automation. Small footprint, affordable and low power consumption with Raspberry Pi at the core. Amazon Alexa...



Low-cost Home Automation with Voice Control Story Background Today's home 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...



Smart Home Dashboard Story My home automation system is a mishmash of devices: the Iris Smart Home platform by Lowe's, Irrigation Caddy, Logitech Harmony, and others. I decided to write an app to...



Home Automation Using Web App With Raspberry Pi Introduction to Our Project: In this project we are going to use one Raspberry pi interfacing with 12 bulb using 3 relay module with low level trigger. We can trigger...

6. **hydroMazing Smart Garden System** Learning how to grow plants can be complicated and costly. Plants are resilient, but just one innocent oversight can ruin your crop. You can avoid these costly mistakes by letting...





WARAN – Home Automation Story I was planning to build a cheap home automation system. I want this to be a modular system so that I can keep adding sensors and devices to it...



Open Smart Hub: Home Automation One hub to rule them all! Home automation is a growing space and every device has it's own way to interact with it. This allows you combine them, make new...



Home Automation – HA4IoT (Windows 10 IoT) 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 repository...



Micropython leak detector with Adafruit and Home-assistant Introduction After experiencing both a new boiler AND a washing machine leak in the same weekend I searched online for a network connected water leak detector. I wanted a device...



hue

Hijack a Hue Remote to Control Anything with Home Assistant Introduction I hope this will be a useful guide if you are starting out with the Hue API and Home Assistant, as the project touches on several core concepts such...



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...



12.



Smart Mirror with Home Automation using chats Hardware components: Raspberry Pi 2 Model B \times 1 PC Monitor with VGA Cable \times 1 Wifi Receiver \times 1 Two way mirror acrylic sheet \times 1 5v Relay Module...

14. **Build your own patient monitor with a Raspberry Pi** Hardware components: ProtoCentral HealthyPi HAT for Raspberry Pi × 1 Raspberry Pi 3 Model B × 1 Raspberry Pi Touch Display × 1 Software apps and online services: Processing Atmel...



15.



Building a Touch-enabled Interface for Windows IoT Hardware components: Raspberry Pi 2 Model B × 1 Waveshare Raspberry Pi LCD Display Module 5inch 800*480 TFT × 1 Software apps and online services: Microsoft Windows 10 IoT Core...

16.



AWShome – Home automation using RPi + Alexa + IoT Hardware components: Raspberry Pi 2 Model B A Raspberry Pi 3 or even a Raspberry Pi Zero will work too! × 1 433Mhz RF Transmitter and Receiver Available for as...

17.



Pool Controller Using Windows 10 IoT Core project to control pool Hardware components: Raspberry Pi 2 Model B × 1 PNY 16GB Turbo MicroSDXC CL10 × 1 SparkFun Arduino Pro Mini 328 - 5V/16MHz × 1 SainSmart 5V 4-Channel Solid State...

18.

19.



Windows 10 IoT Core Speech Recognition Hardware components: Raspberry Pi 2 Model B × 1 LED (generic) × 2 Single Channel Relay × 1 Generic Light × 1 Generic USB Microphone × 1 Software apps and...

20.



Home Automation using Raspberry Pi 2 and Windows 10 IoT Hardware components: Arduino UNO & Genuino UNO For each room you want to automate, take separate Arduino UNO. × 1 Raspberry Pi 2 Model B × 1 Jumper wires (generic)...

21.



DIY Smart Home Security System Hardware components: Raspberry Pi 3 Model B 2 or 3 × 1 16GB SD card × 1 Old webcam × 1 PIR Motion Sensor (generic) × 1 Old smartphone ×...

22. **How to Automate Your Home With Your Voice** Hardware components: Raspberry Pi 3 Model B Have a full setup with Keyboard, Mouse and HDMI monitor. × 1 BeagleBoard.org BeagleBone Black × 1 LED (generic) × 3 Resistor 470...



23.



DIY Self-monitored Smart Home for Vacation Time Hardware components: Raspberry Pi 3 Model B RPi2 or RPi3 × 1 16GB SD Card × 1 Old webcam × 1 Old smartphone × 1 Sound sensor × 1 RF...

24.



Smart Mirror (with Optional Alexa) Hardware components: Raspberry Pi 3 Model B × 1 Lapel Mic × 1 USB Sound Card × 1 16GB MicroSD Card × 1 Gorilla Glue Original × 1 STROMBY Picture...



Web Based Automation For Your Home with Raspberry Pi! 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...



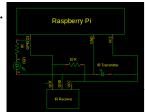
How to Interface a PIR Motion Sensor With Raspberry Pi GPIO This tutorial will show you to interface a PIR motion sensor with the Raspberry Pi and how to use the GPIO pins on it. The GPIO pins on the Raspberry...

IoT Based Raspberry Pi Home Automation Using IBM Bluemix This tutorial will show you how to build a simple Raspberry Pi home automation system that will allow you to control appliances in your home from anywhere in the world....



ESP8266 RGB Color Picker In this project, you're going to build a web server with an ESP8266 to remotely control an RGB LED. This project is called ESP8266 RGB Color Picker. First, watch the video...

29.



Motion triggered music player using Raspberry Pi Home automation is an area many are interested in. There are several home automation solutions available in market but we have a habbit of doing it ourselves. In this tutorial...



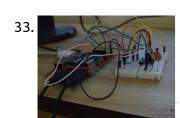
Control an electrical appliance with your smartphone – WiFi Control ANY light or electrical appliance with you tablet or smartphone (wifi) using arduino, blynk and a wemos / ESP8266 board In this tutorial we will be making something I...

31. Raspberry Pi Web Server using Flask to Control GPIOs In this project you'll create a standalone web server with a Raspberry Pi that can toggle two LEDs. You can replace those LEDs with any output (like a relay or a transistor)....





ESP8266 controlled with Android app (MIT App Inventor) In this project, you're going to build an Android app using the MIT App Inventor software that allows you to control the ESP8266 GPIOs. First, watch the video demonstration To learn more...



Raspberry Pi as a tweeting weather station! Getting the idea The idea struck when we were working on centralized air conditioner monitoring system for one of our clients in Bhopal. The client wanted to develop an Android...



Home Control with a Raspberry Pi and Z-Wave Intro In a previous post, I showed you an Arduino based controller to manage the lighting system in the house. Such a device is useful for handling the basic 'electrical'...



Distributed Brew Controller History and Problem Statement I have built a custom electric home brew set and have been using it in various stages of completion for about 5 years. I started using...



Roller-shutter Automations in Python Background All my roller shutters work with electrical motors, so it made sense to hook them up to my z-wave gateway that I had set up in a previous project....



ThiDom Home automation This project uses Arduino, Raspberry and Attiny, it allows you to control nd monitor your home (AC outlet, shutters, heater, light, opening detector, temperature ...). The raspberry is the web...



iBlinds – Make Your Existing Blinds Intelligent You wake up in a dark room and have to use an artificial light before letting the sun in by opening the blinds in the bedroom. You come home from...



WiFi-controlled LED using Raspberry Pi 3 This project demonstrates a basic idea of the Internet of Things (IoT) whose applications are extending from smart homes to wearables to healthcare. "The Internet of Things has the potential...



Web-Enabled Home Thermostat This Instructable explains how I built WiFi enabled thermostats for my home. The thermostats are programmable with 6 different time periods during the day, although increasing that to any arbitrary...



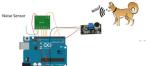
DIY smart home doorbell for less than \$40 Smart doorbells are an amazing tool but still an expensive one (~\$200)! Today in this tutorial, we propose to help you build your own smart home doorbell for less than...



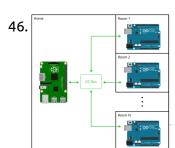
DIY IoT Time Clock for Smart Office Do you know what is a time clock? Time clocks were mainly used at the end of the 19th century and throughout the 20th century as a way to monitor...

Controlling Raspberry Pi GPIO using Android App over Bluetooth Raspberry Pi is very popular for IoT projects because of its seamless ability of wireless communication over internet. Raspberry Pi 3 has inbuilt Wi-Fi and Bluetooth, and Bluetooth is a...

44. **Uber Home Automation** About this project This is an open source system for integrating wireless Arduino sensors to an awesome home automation platform called OpenHAB. It allows you to get email



WARAN – Home Automation About this project I was planning to build a cheap home automation system. I want this to be a modular system so that I can keep adding sensors and devices...



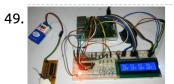
Home Automation using Raspberry Pi 2 and Windows 10 IoT About this project In today's era, technology can enhance human life. Technology is evolving decade by decade. Automation was a science fiction earlier but not today. By combining latest technology...



With an Atmega, create a wireless temperature sensor To continue the project of automation with the Raspberry, the first important step for me is to have a sensor able to send wireless data. Here I present to you...



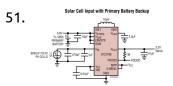
ESP8266 Troubleshooting Guide The ESP8266 has a few common issues, specially when you are trying to flash a new firmware or uploading scripts. This is a companion guide to the Home Automation using ESP8266 and Password Protected...



RF Remote Controlled LEDs Using Raspberry Pi In this session we are going to develop a RF Remote Control using Raspberry Pi, which can be used to control the Devices wirelessly. We can Switch On and Off...



Voice Controlled Lights using Raspberry Pi Today we are building a very useful project in which we can control the LED lights using our voice through Smart Phone. In this project, we will send voice commands from...



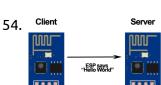
LTC3106 – 300mA Low Voltage Buck-Boost Converter Features Dual Input Buck-Boost with Integrated PowerPath™ Manager Ultralow Start-Up Voltages: 850mV Start with No Backup Source, 300mV with a Backup Source Compatible with Primary or Rechargeable Backup Batteries Digitally Selectable VOUT and...



Home automation with Telegram BOT The project I'm going to describe today it's a sort of proof of concept that will demonstrate the possibility to remote control sensors and actuators (for example a couple of relays) via...

53. **Plug-in touchscreen makes a Raspberry Pi tablet** Distributor element14 has a 7-in. Touchscreen Display for the Raspberry Pi, expanding the ecosystem of accessories, to enable users to create all-in-one integrated projects such as turning their Pi into...

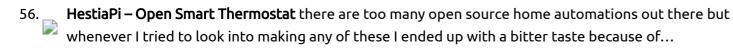




How to Make Two ESP8266 Talk In this project you're going to make two ESP8266 talk with each other. How it works? You're going to set one ESP as an Access Point (Server) and another ESP as a Station...



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...





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...

58.



Oktopod: Dev Kit for Your Robo-ideas! What is Oktopod Studio? Oktopod Studio is a development platform for mechatronics, robotics and automation, which enables creating and controlling low voltage electronic devices, models and home applications /in an...



Raspberry Pi industrial HAT features RS-485 and 1-Wire The "Monarco HAT" industrial interface for the Raspberry Pi offers analog, digital, RS-485, and 1-wire I/O, plus a power supply, watchdog, and RTC. Czech-based REX Controls has passed the halfway...



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...



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...

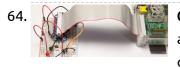
62. Raspberry pi as an nrf24l01 base station with python for smart home or internet of anything projects



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,...



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...



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...



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...



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...

Raspberry Pi OpenCV Pan & Tilt Face Tracker Create your own face tracking, pan and 67. tilt camera on the Raspberry Pi! This tutorial will demonstrate use of the OpenCV (computer vision) library to identify and track faces on...



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 alone our house. While being on vacation,...





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...



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...

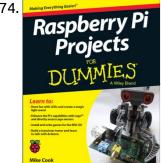
Switching mains electricity with a Raspberry Pi and a remote control Home electronics can open up a new dimension in home automation especially when used with an Arduino or Raspberry Pi. There is however a very real danger when using mains...

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...

73.



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...



Raspberry Pi Projects For Dummies -E-book E-Book description: Raspberry Pi Projects For Dummies is designed for people who are looking for something exciting to do with the Raspberry Pi. This book contains projects to amaze and...

75.



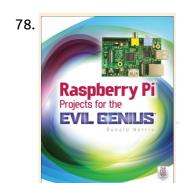
Raspberry Pi Home Automation with Arduino – 2013 -E-book E-Book description: The world of home automation is an exciting field that has exploded over the past few years with many new technologies in both the commercial and open source...

Raspberry Pi Projects -E-book E-Book description: WHEN WE'RE YOUNG, making things is second nature – painting a picture, inventing a game, telling a story, building a rocket from a washing-up liquid bottle that we're...

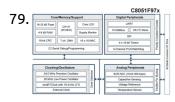


Raspberry Pi Server Essentials

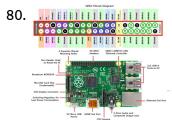
Raspberry.Pi.Server.Essentials E-Book description: The purpose of this book is to get you started with the Raspberry Pi. We will try and cover many different topics to demonstrate the flexibility of the...



Raspberry Pi Projects for the Evil Genius – E – book E-Book description: This Raspberry Pi project book is not only about building a series of interesting projects but also about providing an education regarding the underlying project technologies. I am...



Silicon Labs adds to capacitive sensing MCUs Silicon Labs is sampling capacitive sensing microcontrollers (MCUs) for human-machine interfaces (HMI). The C8051F97x MCU is for Internet of Things, home/building automation, consumer and industrial markets. It targets battery-powered and...



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...



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...



DIY Stripboard/Veroboard Enclosure for Raspberry Pi (Part 2) 16-LED Stripboard Top Schematics, Soldering, and Testing I had decided to design the top board of the enclosure with several LEDs, 3 LEDs on both side, and a Raspberry fruit...



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...



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...



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...





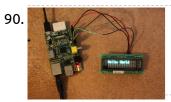
Raspberry Pi Spectrum Analyzer with RGB LED Strip and Python Looking for a first project to try out on a Raspberry Pi, I though what better than a Spectrum Analyzer? (Sometimes this display is erroneously referred to as a graphic...



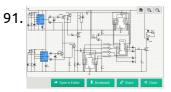
Home Automation using Raspberry Pi, Arduino, Domoticz, MySensors. Hi Fellow makers, This is my first Instructable on Home Automation. The idea is to build a controller and wireless nodes to control and monitor. After a lot of hit...



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...



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...



Home Automation Lighting Control This device is a home automation lighting solution based on the presence of a person inside the room. When a person enters or leaves the room, the circuit automatically turns...



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...



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...



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...



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...



CES: Raspberry Pi Z-Wave daughter card controls homes Z-Wave Alliance member Z-Wave.me has introduced a home control daughter card for Raspberry Pi. Called RaZberry (top of the picture), the hardware module pushes onto Raspberry Pi's I/O connector. There is...

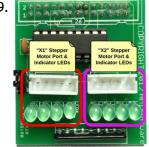


Android development board has two ARM cores Element 14 has launched a single-board development system for Android-based handheld devices. Called RioTboard, it is based around a 1GHz ARM Cortex-A9 core in a Freescale i.MX 6Solo microcontroller. With its...

98. **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...



99.

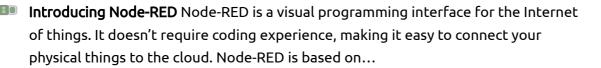


Raspberry Pi – Stepper Motor Control & Breakout Board Overview Many of the previous Raspberry Pi projects I had been working on were based on fairly simple GPIO logic to turn things on and off. Today I wanted a...



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...

101.



102.



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...

103.



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 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...



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...



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...

107.



Free E-Book - Raspberry Pi Home Automation with Arduino Book Description The world of home automation is an exciting ield that has exploded over the past few years with many new technologies in both the commercial and open source...



WiFi based home automation by Intel Edison and Banana Pi M1 #IntelloT#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...





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 selfdiscoverable...



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...

111.



Automation controller taps Raspberry Pi Compute Module Techbase has designed a Raspberry Pi Compute Module into a Linux-based "ModBerry" automation computer backed by an "iMod" cloud platform for remote control. The computer-on-module version of the Raspberry Pi...



Wireless Multi-Channel Voice-Controlled Electrical Outlets with Raspberry Pi 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...

Idiot's Guide to a Raspberry Pi Garage Door Opener It has become apparent that WebIOPi is not yet 113. compatible with the Raspberry Pi v2. If you are following this tutorial, you must be using the firstgeneration Pi. The link...

114.



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...



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...

116.



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....



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...



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...





Silicone Water Repellent

