List of Projects using arduino with advance view:

1. Arduino LED Bar Graph Code The bar graph - a series of LEDs in a line, such as you see on an audio display - is a common hardware display for analog sensors. It's made up of a series of LEDs in a row, an analog input like a potentiometer,...... Listed under: LED Projects, Projects

2. Arduino Guitar Tuner Build your own electric guitar tuner using the Arduino! I decided to make this because I wanted to experiment with audio input and frequency detection. I used Amanda Ghassaei's method for Arduino Frequency Detection in order to get frequency readings using the Arduino. I used LEDs that...... Listed under: Sound – Audio Projects

3. Paper Electronics: Make Interactive, Musical Artwork with Conductive Ink using Arduino If you've ever wanted to bring a piece of paper to life, now is your chance. This instructable will take you through all the necessary steps to create an amazing interactive flyer or artwork. This event flyer is no ordinary piece of print. It is printed using...... Listed under: Projects, Sound – Audio Projects

4. Arduino-based master clock for schools If your school, or kids school, or other location relies on a central master clock that is broken, you may have a use for this device. New master clocks are available of course, but school budgets are under extreme pressures, and it really is a...... Listed under: Clock – Timer Projects, Projects

5. Rainbowduino Sign using Arduino The Rainbowduino is a variant of the Arduino and among other things is capable of driving an 8x8 RGB LED matrix. I had just finished a backyard re-model and was in need of an entrance sign. Step 1: Carving and Painting the Sign I had...... Listed under: LED Projects

6. Another Arduino Traffic light After working with the arduino and not knowing what the heck I'm doing I made Another simple traffic light. I looked around the web to find one that looks about normal and came across none. They seemed too fast. So, I found and modded some...... Listed under: Car Projects, Projects

7. Electronic Music Box Powered by Arduino (sort of) Music is the most universal means of expression. Regardless cultural language or age the idea conveyed though music would not differ much. It is safe to say everyone loves music, one type or another. When one's favourite piece is played there is a overwhelming desire...... Listed under: Sound – Audio Projects

8. Aqua Garduino Mini @hydroFishAqua82 Arduino Powered Micro Aquaponic System with Pi Camera and Twitter Feed We are creating an automated aquaponic system with mobile updates via Twitter. Sensors and motors will be controlled from an Arduino while the entire system, including mobile updates, will be orchestrated by a Raspberry...... Listed under: Home Automation Projects

9. Homemade arduino printer If you want to make your own high resolution printer (maybe not so high res), you are at the right place. This Instructable will show you how to do with two dead cd/dvd drive and a pen (pilot, whiteboard marker, whatever you have) at the...... Listed under: How To – DIY – Projects, Projects

10. My Arduino In Circuit Programmer This Lazy Old Geek is also an Arduino Geek. If you are an Arduino Geek, one of the common microcontrollers used by Arduinos is the Atmega328 chip. In order to use Arduino software, the Atmega must have bootloader software on it. Okay, so I bought...... Listed under: Arduino Programmer Projects, Projects

11. BLDC Motor Control with Arduino There is a lot of interest these days among hobbyists in controlling brushless DC (BLDC) motors, which have improved performance and better energy efficiency over traditional DC motors, but are more difficult to use. Many off-the-shelf products exist for this purpose. For example, there are...... Listed under: Motor Projects
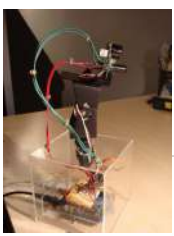
12. Beginner Programming of Arduino This video is from a meeting of the Kids and Technology Meetup group in Washington DC. The youth who show up to these free meetings are eager to learn advanced uses of computers. The presenters were John Dukovich and Hugo Estrada.... Listed under: Arduino Programmer Projects, Projects

13. Arduino Button Mouse Control Code Using the Mouse library, you can controls a computer's onscreen cursor with an Arduino Leonardo, Micro, or Due. This particular ex uses a five pushbuttons to move the onscreen cursor. Four of the buttons are directional (up, down, left, right) and one is for a...... Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

14. Arduino String Character Functions Code The String functions charAt() and setCharAt() are used to get or set the value of a character at a given position in a String. At their simplest, these functions help you search and replace a given character. For example, the following replaces the colon in...... Listed under: Development Board – Kits Projects, Projects

15. Arduino-Radio Controlled Hydrogen Blimp The blimp is controlled by a transmitter on the ground, operated by a human. There are three control levers-- one for each motor, and one for the servo that rotates the axis they're attached to. You push / pull to make the motors speed up...... Listed under: Projects, Radio Projects

16. Arduino Switch (case) Statement, used with serial input An if statement allows you to choose between two discrete options, TRUE or FALSE. When there are more than two options, you can use multiple if statements, or you can use the switch statement. Switch allows you to choose between several discrete options. This tutorial…… Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

17. Potentiometer or variable resistor control LED Code The if() statement is the most basic of all programming control structures. It allows you to make something happen or not depending on whether a given condition is true or not. It looks like this: if (someCondition) { // do stuff if the condition is true } [Get Code]…… Listed under: LED Projects, Metering – Instrument Projects, Projects

18. MultiSerial Mega using Arduino Sometimes, one serial port just isn't enough! When trying to communicate with multiple serial enabled devices, while also sending info back to the main serial window, a few extra RX/TX ports can be a welcomed thing. This example makes use of one of Arduino Mega's…… Listed under: Development Board – Kits Projects, Projects

19. Arduino 7 segment Displays Digital Clock With Charlieplexing LEDs This is my second instructable. I just had a mood of making a digital watch. But wanted to make it a learning process. I already had a sanguino i could have easily used that Atmega644 chip. it would have been more than enough. But i…… Listed under: Clock – Timer Projects, Home Automation Projects, Projects

20. Autonomous Arduino Car My questions for the Make-to-Learn Youth Contest 🙂 What did you make? This goal of this project was to take commonly available electronic equipment and create an inexpensive, self-controlled vehicle. In simpler terms, this is an attempt at basic autonomy. It uses an arduino logic…… Listed under: Car Projects, Game – Entertainment Projects, Projects

21. Remake the Mosquito Killer using Arduino Hi, everyone, i would like to introduce how i remake my mosquito killer here. With this remaking, my mosquito killer become "Smart", and really facilitate my life. I rented a room in very remote place to save my money, in the summer, the biggest trouble…… Listed under: Home Automation Projects, How To – DIY – Projects, Projects

22. Instagram Inspired DIY Photo-Booth using Arduino I decided to build a simple photo-booth as a fun addition for events, this goes through the basic steps of how i went from a few pieces of wood to a fully functional booth. I have also included a photo of what the images look…… Listed under: Arduino Video – Camera – Imaging Project Ideas, Ideas

23. How to connect Arduino and RFID On this instructable I will try to show how to interface a RFID sensor with the Arduino. I am using the RFID sensor from seeedstudio the serial version of it. There are a few parts you will gonna need. I also bought some RFID keys……. Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas

24. The Arduino Weather Station I've always been interested in monitoring my local weather, and noticed the difference between what weather.com and accuweather.com think my local weather is, and what I see out the window. I also wanted better control over my heating and A/C system. As a computer and…… Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas

25. Arduino GPS Datalogger Do you want to log some GPS data onto an SD card using your Arduino? Do you already own a Sparkfun microSD shield and GPS module? Did you try the Adafruit Sheild (although it is awesome and cheap) but it stole all of your pins?…… Listed under: GPS Based Project Ideas, Ideas

26. Serial Communications with Arduino At this point you should have a robot that can think on its own, we need to be able to tap into its thought process. See what he sees. Make some of his decisions for him. in essence, we need to be able to guage…… Listed under: Ideas, Interfacing(USB – RS232 – I2c -ISP) Project Ideas

27. Make Money with Arduino **** ENTERED IN THE HURRICANE LASERS CONTEST**** What would I do with a Laser Cutter? Build Simple Robotic Kits to teach people a Hobby that I Love.Ever wanted to make some money from your projects?This Instrutable will show you how to Simply interface a coin…… Listed under: Ideas, Other Project Ideas

28. Build an RFID time-clock system using Arduino With this project you can build an RFID time-clock system to keep track of employees, children and more. Updated 18/03/2013 Recently I was listening to a friend who has three teenage children, of whom needed to arrive home before their parent. Unfortunately the parent needs…… Listed under: Clock – Timer Projects, Projects, RFID - NFC projects

29. Drifter – Arduino controlled RC car Drifter is based on a cheap RC toy car I found at Toys'r'us, named 'Fast lane Monster Drift'. I think it's the same model Frits has been used in an episode of TLIHR. It doesn't work well, you get what you pay for. But it is a…… Listed under: Car Projects, Projects

30. House Temperature Monitor using Arduino Recently a family member had his furnace fail while he was away from his house for a long period of time in the winter. His pipes burst and caused quite the mess. This project describes a temperature sensor that broadcasts the temperature in his house to the…… Listed under: Home Automation Projects, Projects, Temperature Measurement Projects

31. Time Lapse Digital Camera using Arduino Following the instructable here, I was able to turn an old digital camera into a time lapse camera using an arduino, a relay, and an open source software program called makeAVI (windows). To modify the camera I disassembled the camera cover and removed the button that…… Listed under: Projects, Video – Camera – Imaging Projects

32. Arduino Knight Rider Code Arduino Knight Rider light effect, a simple variation of blink code. Instruction; 1) Connect all LED as diagram below, make sure cathode lead of LED at ground wire. 2) Connect all 330Ω resistor to anode lead of LED. 3) Connect all jumper wire to digital…… Listed under: LED Projects, Projects

33. The Self-Balancing Robot using Arduino Introduction The idea of this project was to design and construct a robot that consists of a body and two wheels that would be able to balance on its own. This behavior is similar how a segway (a new mode of transportation) works. Our goal…… Listed under: Projects, Robotics – Automation Projects
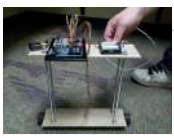
34. Arduino Thermal Camera My recent arduino project was to build thermal camera on the cheap using an ir sensor and some pan/tilt hardware. If you look at the device picture to the left there is also acoustic range finder mounted to the top. The device works by sweeping...... Listed under: Projects, Video – Camera – Imaging Projects

35. Arduino MP3 Player I present this new Arduino project: A full MP3 player based on Arduino. As you can see in the photo, the idea was to build a standalone player, in the style of antique radios or 'tapes', in the age of Iphones .... The player uses a small...... Listed under: Projects, Sound – Audio Projects

36. Analog VU meter and Clock using Arduino This project brings back the old time Analog VU Meter, with the added functionality of a neat looking clock! When you turn off your music the meters automatically swing into to clock mode. Behind it all is the popular and easy to use Arduino. This...... Listed under: Calculator Projects, Metering – Instrument Projects, Projects

37. Arduino MIDI Foot Pedal Keyboard The Origin My dad is a musician. He can play a multitude of instruments. However, he only has two arms, BUT he also has legs! That's when we decided that we would reuse the foot pedals from an old organ and convert them into an...... Listed under: Game – Entertainment Projects, How To – DIY – Projects, Projects

38. Arduino Police Strobe Light Code Arduino Police Strobe Light effect, another simple variation of blink code. Arduino Police Strobe Light effect, another simple variation of blink code. Parts List; 1) 2x 5mm red LED 2) 2x 5mm blue LED 3) 1x Arduino 4) 4x 330Ω resistor 5) 1x 10kΩ potentiometer...... Listed under: Car Projects, LED Projects, Projects

39. Arduino RFID Lock The Arduino RFID lock How does it work? The Arduino RFID lock is a lock that can be opened easily, but is secure. The lock works with a server database that can register card codes. On the door there is a RFID reader connected to...... Listed under: Projects, RFID - NFC projects, Security – Safety Projects

40. 48×8 SCROLLING MATRIX LED DISPLAY USING ARDUINO CONTROLLER A monochrome (single colour) LED dot matrix display is used for displaying the Characters and Symbols which is interface with a microcontroller. This project will deliberate on displaying a scrolling text message on a 48×8 LED dot matrix display. The microcontroller used is Arduino Uno...... Listed under: LED Projects, Projects

41. Connecting Arduino LCD Display Code LCD display is great way to display output from your arduino when it not connected to your computer. The common display used in arduino projects is 16×2 parallel LCD display which compatible with the Hitachi HD44780 driver. It can easily recognize with it 16 pin...... Listed under: LCD Projects, Projects

42. Build a fully featured Arduino Thermostat In this post I will attempt to describe the steps I took to build the arduino based thermostat shown in the following videos. The video was taken when around just half of the coding of the menu system was complete, but gives you a...... Listed under: Projects, Temperature Measurement Projects

43. DIY FSK RFID Reader using Arduino This page is describes the construction of an RFID reader using only an Arduino (Nano 3.0 was tested, but others may work), a hand-wound wire coil, and some assorted low cost common components. Credits The hardware and software designs for this project are based in...... Listed under: How To – DIY – Project Ideas, Projects, RFID - NFC projects

44. Arduino Voltmeter Code This arduino projects show how to make voltmeter with your arduino. It use voltage divider concept to estimate the voltage input. Instruction; 1) Connect all jumper wire as shown in diagram. Upload this code to your arduino /*   Voltmeter   Voltmeter base on voltage divider concept.   Code based on: http://www.clarenceho.net:8123/blog/articles/2009/05/17/arduino-test-voltmeter   Coded by: arduinoprojects101.com */...... Listed under: Metering – Instrument Projects, Projects

45. Arduino Temperature Sensor Code This arduino projects show how to read Celsius and Fahrenheit temperature with LM35 temperature sensor. Parts List; 1) 1x 16×2 parallel LCD display (compatible with Hitachi HD44780 driver) 2) 1x Arduino 3) 1x 10kΩ potentiometer 4) 1x LM35 temperature sensor 5) Jumper wire Instruction; 1)...... Listed under: Projects, Sensor – Transducer – Detector Projects, Temperature Measurement Projects

46. Web Server using Arduino In this example, you will use your Ethernet Shield and your Arduino to create a simple Web server. Using the Ethernet library, your device will be able to answer a HTTP request with your Ethernet shield. After opening a browser and navigating to your Ethernet...... Listed under: Internet – Ethernet – LAN Projects, Projects
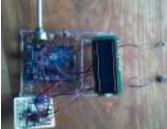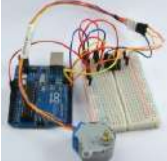
47. Arduino Stopwatch Code Arduino projects, running stopwatch on arduino. Arduino projects, running stopwatch on arduino. Parts List;1) 1x 16×2 parallel LCD display (compatible with Hitachi HD44780 driver)2) 1x Arduino3) 1x 10kΩ potentiometer4) 1x 10kΩ resistor5) 1x switch6) Jumper wire Instruction; 1) Connect all jumper wire as shown in...... Listed under: Clock – Timer Projects, Projects
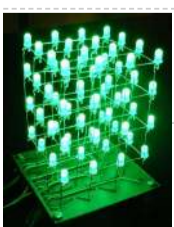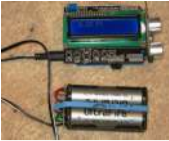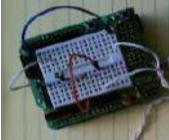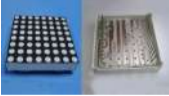
48. LED Show using Arduino Esplora This example shows you how to read the values from the joystick. The output will be displayed through the serial monitor and as a color on the RGB LED. The joystick has two axes, X and Y. Each axis controls a color of the RGB...... Listed under: LED Projects, Projects
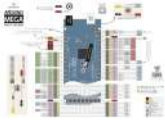
49. Arduino RPM Counter / Tachometer Code Arduino projects, make arduino rpm counter with arduino.   Instruction;1) Connect all jumper wire as shown in diagram. 2) Connect IR LED to digital pin 13. 3) Connect IR Phototransistor (dark) to digital pin 2. Make sure shorter lead connected to digital pin 2 and...... Listed under: Metering – Instrument Projects, Projects

50. Arduino HC-SR04 How to use Ultra Sonic Sensor Arduino HC-SR04 The Arduino HC-SR04 is different from most of those commonly seen on the market, which have 4 pins compared to 3 pins. But the operation principle is the same, transmit signal, and depends on when the signal is received to estimate the distance……. Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects

51. Arduino Hexapod Robot Arduino Hexapod Robot Design I will show you how to build an arduino hexapod robot, from building the body, to how to implement the algorithm. To learn about the implementation of the algorithm, read this first, if you are not sure what is IK, read…… Listed under: Projects, Robotics – Automation Projects

52. Real-Time Arduino GPS Tracker with iPhone app [INTRO] This past semester, I decided to build a GPS receiver with an iPhone app that tracks it for my semester project. Here is a step-by-step tutorial to show you how you can build your own. [OVERVIEW] Architecture of my Real-Time GPS Tracker project. I'll…… Listed under: Blog, GPS Based Projects, Phone Projects, Projects

53. Arduino GPS Tracking System This was easily the most time I've spent producing an Arduino Tutorial. I've been sporadically walking around NYC with this Arduino GPS for weeks as I've tweaked the code and gotten it just right. If it wasn't obvious from the title, this tutorial will teach you…… Listed under: Featured, GPS Based Projects, Projects

54. A arduino library for the MAX7221 and MAX7219 These two chips provide an easy way to control either an array of 64 Led's or up to eight digits made of 7-segment displays with a minimum of electronic components. Besides the chip itself you will need only a single resistor and one or two…… Listed under: Other Projects, Projects

55. An amplifier for Arduino For my project, the Arduino output is not enough so digging on the net and asking to a friend some help, I managed to build an amplifier to feed my 3 computer fans. This circuit can be used as an amplifier to switch on and…… Listed under: Interfacing(USB – RS232 – I2c -ISP) Projects, Projects, Sound – Audio Projects

56. Arduino temperature controlled PC Fan Oscar Gonzalez gives us a simple tutorial for speed controlling a PC FAN and reading a LM35 temperature sensor with an Arduino microcontroller. He covers the use of an optocoupler, PWM (Pulse Width Modulation) and reading analog voltages with the Arduino. He even has a…… Listed under: Projects, RTOS – OS Projects, Temperature Measurement Projects

57. Power (Energy) Meter using Arduino Part 1. Analog Front-End. Opto-Isolator. Looking at the Power Quality Analyzer display, I was wandering, if there is any error in the measurement results, introduced by transformer. Overall THD picture doesn't change much, suspiciously drawing same chart in the morning and in the evening, when…… Listed under: Metering – Instrument Projects, Projects

58. Audio VU Meter using Arduino Biasing AC input using resistor divider and scaling up / down if necessary; Sampling fast and accurately using direct access to Control Registers of ADC and Timer1; Subtract whatever was added at step #1 from result of Analog / Digital conversion and Square; Average /…… Listed under: Metering – Instrument Projects, Projects, Sound – Audio Projects

59. True Analog Audio Volume Control using Arduino ow my Arduino can precisely measure audio input (VU meter),   and obviously, next thing that comes to mind right after measurements, is regulation or control. There are many different ways how to electronically adjust audio volume or level of AC signal. I'll name a few:…… Listed under: Projects, Sound – Audio Projects

60. Sound Localization using Arduino Well, it's elementary simple in theory, how to do sound localization based on phase difference of signals, that received by two spatially distant microphones. The Devil, as always, in details. I've not seen any such project created for arduino, and get curious if it's possible at…… Listed under: Projects, Sound – Audio Projects

61. Speech Synthesizer using Arduino Synthesized speech was for a long time the Holy Grail of computing, and back in the 1980s when a 4MHz CPU made your computer the fastest machine in the neighborhood it just wasn't practical for software to create intelligible speech. In those days the only…… Listed under: Sensor – Transducer – Detector Projects

62. Spectrum Analyzer, Arduino project with FFT algorithm The basic idea was to create color organ / spectrum analyzer on arduino board, trying to minimize quantity of external components, like analog filters, LED display drivers, etc. Spend a lot of time in search on internet I was able to find only two !…… Listed under: Game – Entertainment Projects, Home Automation Projects, Projects

63. Arduino Sound Alarm I've just completed my second Arduino project, a sound level detector which sets off an "alarm" when there's the sound level is to high for too long. I built it for use in a school that wants to provide visual feedback to students when they…… Listed under: Projects, Security – Safety Projects, Sound – Audio Projects

64. MEGAshield KIT for Arduino MEGA 2560 R3 and Arduino DUE ARDUINO MEGA 2560 REV3 The MEGA 2560 is designed for more complex projects. With 54 digital I/O pins, 16 analog inputs and a larger space for your sketch it is the recommended board for 3D printers and robotics projects. This gives your projects plenty of…… Listed under: Development Board – Kits Projects, Projects

65. How To Control A Stepper Motor With An Arduino Uno Overview Stepper motors fall somewhere in between a regular DC motor and a servo motor. They have the advantage that they can be positioned accurately, moved forward or backwards one 'step' at a time, but they can also rotate continuously. In this lesson you will…… Listed under: Motor Projects, Projects

66. Arduino controlled Bluetooth-bot This instructable will show you how to convert an old toy R/C car from the thrift-store ($1.50) into a bluetooth controlled robot. To make the conversion, you will need an Arduino (any type), an L298N dual 2-amp motor-controller (or similar), and a bluetooth serial adapter…… Listed under: Projects, Robotics – Automation Projects

67. Arduino Battery As many of you may know, this Lazy Old Geek loves Arduinos. Many of my projects are portable and need a battery source: http://www.instructables.com/id/Arduino-Pedometer/ http://www.instructables.com/id/Arduino-Nokia-LCD-Sensors/ http://www.instructables.com/id/Ultrasonic-Tape-Measure/ All pricing was determined about early 2012. So, I've been using Adafruit 6 AA Battery holder $5.00 https://www.adafruit.com/products/248...... Listed under: Battery Projects, Projects

68. Data Logger Project using an Arduino This is a data logger I made for my class. I couldn't find any instructions that I could use to make the Arduino record the light brightness and the temperature. Then display the temperature and the light value on the LCD then Save it to...... Listed under: Projects, Sensor – Transducer – Detector Projects, Temperature Measurement Projects

69. Arduino & Visual Basic 6 Light Controller This instructable is something like a tutorial for new VB users. It shows how to create a parser base VB6 program to interact with Arduino circuit. Basically, interaction is in the form of serial communication via the USB port. This is my practice after learning...... Listed under: Other Projects, Projects

70. Arduino LCD Twitter display a.k.a. the gratuitously complicated bidirectionally communicating Arduino-based scrolling Twitter display and notifier. ---- This project was mainly done as an excuse to learn how to use character LCD displays with my Arduino, and figure out how to make a bidirectional serial protocol. One major design...... Listed under: Internet – Ethernet – LAN Projects, LCD Projects, Projects

71. Arduino Touch Screen Room Control Hey everyone, I finally finished my touch panel for my bedroom wall and am here to show you how i made it. Unfortunately its not in my wall yet as I might be moving and don't want to make anymore holes in my walls,...... Listed under: Home Automation Projects, Projects

72. Very Simple Arduino Electric Lock This is a instructable for a very simple Arduino controlled electric lock. The key idea here is to be very simple as this was more of a proof of concept prototype type of thing. The Arduino is used as a switch to control the lock...... Listed under: Projects, Security – Safety Projects

73. Simple Parking Sensor using Arduino My car has only parking sensor for the Reverse, so when I enter the Garage there is no way to know if I am close enough to the wall to allow the door to close or too close that I can hit the wall with...... Listed under: Car Projects, Projects, Sensor – Transducer – Detector Projects

74. Arduino Weather Station Part3, Rain So one of my last projects was adding a weather vane to my Arduino weather station. http://www.instructables.com/id/Arduino-Wind-Chill-Machine/ http://www.instructables.com/id/Arduino-Weather-Station-Part2/ This Lazy Old Geek decided to add a rain gauge to it even though we don't get much rain in the high desert. Most digital rain gauges...... Listed under: Projects, Sensor – Transducer – Detector Projects

75. simpleTweet_01 python using Arduino Arduino Python Twitter (Windows) In this instructable we'll modify my simpleTweet_00 and rewrite the Processing code with Python. You can expect an ignorant walkthrough by an illiterate noob, but maybe that's just what you're looking for. Before you begin: If you need help installing Python,...... Listed under: Development Board – Kits Projects, Projects

76. Arduino Home automation This is a relatively simple controller for controlling equipment in your home. At the moment I control my central heating, security and lighting. By sending commands from my home computer. My homeeasy central heating controller hack. http://www.instructables.com/id/BampQ_homeeasy_home_automation_central_heating_c/ I am also able to login remotely from...... Listed under: Home Automation Projects, LED Projects, Projects

77. Arduino 4x4x4 LED Cube Overview: This instructable will cover the building process of an 4x4x4 LED Cube. I will be using an Arduino to control the LEDs. Since the Arduino (Freeduino) has a total of 20 pins (including the analog pins) we will not need to have any multiplexing...... Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects

78. Color Changing Night Light with ATtiny using Arduino I wanted to create something for my wife as a present and this is what I came up with. This is a dark activated color changing night light. It has a sensor that can tell when the room light is turned off. This then will...... Listed under: Game – Entertainment Projects, Home Automation Projects, LED Projects, Projects

79. LED Dot Matrix Display using an Arduino In this project, you shall again use two sets of shift registers. These will be connected to the rows and columns of the dot matrix display. You will then show a simple object, or sprite, on the display and animate it. The main aim of...... Listed under: LED Projects, Projects

80. Simple Relay Shield for Arduino Shield to control 6 relay, 6 digital input and 6 analog input with Arduino Duemilanove, Arduino UNO. The digital inputs and relay outputs are equipped with an LED that indicates the status. The circuit diagram is very simple: Step 1: Schematics and PCB In this...... Listed under: Development Board – Kits Projects, Projects

81. Squirt – Arduino, motion activated water cannon Squirt is a motion activated water cannon using Arduino. This was designed for use in the garden but as it's winter we tested it in the bathroom. It works! True motion tracking is expensive and complicated so this system activates when the victim moves into...... Listed under: Home Automation Projects, Motor Projects, Projects

82. Arduino Pedometer Problem: So my nutritionist (doesn't everyone have a nutritionist) suggested I should increase my exercise which primarily consists of walking my dog. She even gave me a chart of activities and calories burned. Here's an example. http://www.nutristrategy.com/caloriesburned.htm Well, being a LAZY OLD GEEK, I decided...... Listed under: Metering – Instrument Projects, Projects

⬆

83. Arduino Mega Pinout Diagram Arduino Mega Introduction: The Arduino Mega is a microcontroller board based on the ATmega1280 (datasheet). It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB…… Listed under: Pinouts, Projects

84. Traffic Lights Beginner Arduino Project This is a beginners project for the Arduino. I am using the Arduino Uno but should work with little or no modification on other arduino models. Setting up the hardware is very easy. This project is more of a training tool for learning how to program…… Listed under: Car Projects, LED Projects, Projects

85. Arduino + Temperature + Humidity A simple temperature sensor using one LM35 Precision Temperature Sensor , Humidity Sensor and Arduino, so you can hookup on your future projects. The circuit will send serial information about the temperature and humidity so you can use on your computer. I have taken data…… Listed under: Projects, Temperature Measurement Projects

86. Marble Disorder – a marble maze simulator with tilt switches using Arduino Marble Disorder is a borderline case of Marble Madness 🙂 It simulates a marble maze by sensing the box's orientation with 2 tilt switches. Stop the press: there's a new and more intuitive version that doesn't require the spin knob (See video). I keep documenting the original…… Listed under: Game – Entertainment Projects, Projects

87. Turing Alarm for Arduino NOTE: This Instructable is currently incomplete. I will finish it before September 19. I started this project after seeing Nick Johnson's Turing Alarm clock. I found that the PIC chip he used was a little too advanced for me, so I decided to use the…… Listed under: Projects, Security – Safety Projects

88. Arduino Electronic Dice using random numbers This instructable will show you how to make an electronic dice with minimal experience using 7 LEDs, resistors, jumper wires, and of course the arduino (or arduino clone). I wrote this instructable for anyone to easily follow along and learn more about the arduino. Questions…… Listed under: Development Board – Kits Projects, Projects

89. LED Hat Display with Pong using an Arduino A while ago, as my first microcontroller project, I made a Pong game on a 5x7 LED display, but then nothing became of it. Recently I was given a hard hat as part of a uniform (for an engineering competition) and told to customize it,…… Listed under: Game – Entertainment Projects, LED Projects, Projects

90. Temperature Control For Kitchen Appliances using Arduino In this Instructable, I will step through controlling the temperature of most kitchen appliances. As an example, I will use an old Westbend Poppery popcorn maker (aka. coffee roaster), but these same techniques will be applicable to most hot plates, coffee makers, and waffle irons……. Listed under: Home Automation Projects, Projects, Temperature Measurement Projects

91. Arduino Binary Alarm Clock This Instructable will show you how to build an binary alarm clock, with a touch sensor snooze button. This is my first instructable and my first real arduino project, I hope you like it! I bought an arduino a while back and I think it's…… Listed under: Clock – Timer Projects, Projects

92. Arduino RFID Door Lock ***Updated 8/9/2010*** I wanted to make an easy and secure way to enter my garage. RFID was the best way to unlock my door, even with my hands full I can unlock the door and push it open! I built a simple circuit with a…… Listed under: Home Automation Projects, Projects, RFID - NFC projects, Security – Safety Projects

93. Wireless Altoids Display using an Arduino This Instructable will show you how to modify an Altoids tin for a wireless 2x16 character display. Using an Altoids tin was inspired by the need to have a small yet protective enclosure for a pair of Xbee modules recently bought from Sparkfun. I purchased the…… Listed under: LCD Projects, Projects

94. Fun Sun-tracking Arduino The Just-For-Fun Sun-tracker   using the Arduino and two servos. This device, along the lines of the most useless toy, is not so much for function as it is for fun. But as with many things, you can't spell function…… Listed under: Projects, Sensor – Transducer – Detector Projects

95. Reaction Time Tester using an Arduino A month ago I knew nothing about Arduino and now…..my first project! Looking back, this project combines allmost all of the tutorials that I have read in this short period: blinking LED, push button, piezo and LCD display. A useful project for every beginner! I…… Listed under: Clock – Timer Projects, Projects

96. Kid's Game to Arduino Enigma Machine The technology behind Enigma machines and the work done to crack them has influenced cryptography, cryptanalysis, and computer science in general. If you're unfamiliar with Enigma machines, it's a device that was developed near the end of World War I, then used extensively by the…… Listed under: Game – Entertainment Projects, Projects

97. DIY Arduino or The DIY-Duino THIS ENTIRE TUTORIAL IS ALSO AVAILABLE ON MY WEBSITE AT http://www.theparsley.com/arduino/diy/ To quote the Arduino website: "Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments."…… Listed under: How To – DIY – Projects, Projects

98. Steering Wheel Drive R/C Car with Arduino IP Control Car was launched in 2001. I make the similar function car utilizing commercialized products. The concept of Car No.02 is to utilize commercialized products, and I am an amateur in electrical. So, do not blame me that the system is not sophisticated, i.e……. Listed under: Car Projects, Projects, Robotics – Automation Projects

99. Make A Digital Clock From Scratch using arduino In some point in the life of every electronics hobbyist the need to make a clock is borned, in my case it was about a month after I soldered my first part on a board, but back then I didn't have the right tools, parts…… Listed under: Clock – Timer Projects, Projects

100. Arduino Processing Audio Spectrum Analyzer In this Instructable I am going to show how to make a program in Processing that analyzes sound on your computer and sends data to an Arduino that controls an LED matrix to show the spectrum analysis. I will be explaining where to get materials,…… Listed under: LED Projects, Projects, Sound – Audio Projects

101. Plantduino Greenhouse using an Arduino This summer I wanted to combine my two loves of plant science and engineering. Thus I am constructing my very own greenhouse in my backyard. I am an undergrad, and as any former student knows, this means I move around constantly, and I am not…… Listed under: Home Automation Projects, Projects
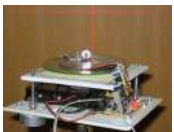
102. Arduino Solar Tracker What is does: It searches for the brightest light source like the sun. Step 1: How it works How it works: I'd made a sensor of 4 LDRs with sheets between them The withe stips are the LDRs   When the stick on top is…… Listed under: Projects, Sensor – Transducer – Detector Projects

103. Tyco RC Arduino Robot Wanted to make your own robot but couldn't afford the fancy H-Bridge IC's or etch your own PCB? Want a quick and dirty method of making your own wheeled robot? Then you're in luck, but if you want to make your own wheeled robot AND…… Listed under: Projects, Robotics – Automation Projects

104. My Arduino WordClock The initial project, and certainly the one to which many were inspired is that of Doug Jackson. http://www.instructables.com/id/The-Word-Clock-Arduino-version/ also inspired by http://www.highonsolder.com/blog/2011/1/8/arduino-word-clock.html http://www.instructables.com/id/Sleek-word-clock/ Step 1: The Materials The list of materials for the board depends on how you plan to make the electronics, if you…… Listed under: Clock – Timer Projects, Projects

105. Chicken Light Timer using an Arduino The wife is into raising chickens and now that the daylight savings is getting near she wanted a way to keep the egg laying production in high gear. According to the material that she reads, chickens will maintain their egg laying production if they get…… Listed under: Clock – Timer Projects, CNC Machines Projects, Projects

106. Ultrasonic Range Finder with an ATtiny85 using an Arduino I'm here to show you how to use a HC-SR04 Ultrasonic Range Finder with an ATtiny85 as well as programming the ATtiny85 using the wonderful shield that randofo created. List of materials: ATtiny85 Programming Library Arduino Uno HC-SR04 Ultrasonic Range Finder and Library Jumper Wires Breadboard ATtiny85 Step 1: Program…… Listed under: Metering – Instrument Projects, Projects

107. Auto Leveling Laser Cross using Arduino So this Lazy Old Geek purchased a Laser Cross. I created a manual leveling Laser Cross to use for aligning stuff on my drill press: http://www.instructables.com/id/ManualLevelingLaserCross/ Well, being a Geek I decided to make an automated platform that adjusts automatically with an Arduino. Well, the…… Listed under: Projects, Sensor – Transducer – Detector Projects
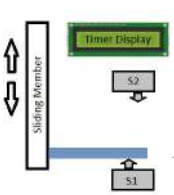
108. Arduino 2-axis servo solar tracker What is a solar tracker? A solar tracker can increase the efficiency of a solar panel by up to 100%! It does this by always keeping the panel perpendicular to the incoming rays of sunlight. here's an equation to prove this: P = AW sin…… Listed under: Sensor – Transducer – Detector Projects

109. Arduino True Random Number Generator This is just a fun project I have been working on in the last little while. If you like this instructable, consider voting for it in the Arduino Challenge! Anyone who has experience with programming will have probably used random numbers in their code. These random…… Listed under: Calculator Projects, Projects
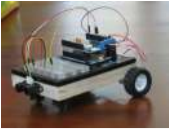
110. Bubble Alarm Clock Makes Waking Up Fun using Arduino Waking up to a buzzing alarm clock sucks. I'm one of those people who doesn't like to wake up before the sun is out (or has been out for many hours). So what better way to make waking up fun than having a bubble party…… Listed under: Clock – Timer Projects, Game – Entertainment Projects, Home Automation Projects, Projects

111. Uno The Arduino Robot Age: 13 Meet Uno the Arduino powered robot. Some functions include a blinking nose, moving antennas, rotating head, IR distance sensor, twin motor gear box and rotation counters. Uno is made with relatively easy to obtain parts. This project provides a good introduction to Arduino. robot.skp475 KB Step 1: Materials Material and tools • Foam board…… Listed under: Projects, Robotics – Automation Projects

112. Arduino Based Auto Timer The Need: Last week around at work I had another usual un-usual problem to face with. Having to make lots of mechanisms n components to work with-in seconds or fracs at times I kind-of knew this was always coming. And invariably so my poor mind…… Listed under: Clock – Timer Projects, Projects

113. Carduino- A simple Arduino robotics platform with its own library This is, as the title says, an Arduino-based robotics platform, with its own library. The "standard" model comes with two back motors, two omni-wheels in the front, and a distance sensor mounted on the front. It also has breadboard space on top for adding whatever...... Listed under: Projects, Robotics – Automation Projects

114. Building a semi Smart, DIY boat with Arduino and some other sensors I based this off of this really nice instructables.com post for building a water bottle boat, with some additions for obstacle avoidance and light-guided control. I used Arduino as a microcontroller, an ultrasonic sensor in the front, a few simple switches on the side of the boat,...... Listed under: Game – Entertainment Projects, Projects, Sensor – Transducer – Detector Projects

115. Remote controlled webcam using Arduino Web-enable your interactive sensors over desktop, smartphone and tablet devices. This tutorial describes in detail how to use the free SensorMonkey service to remotely control a pan and tilt webcam attached to an Arduino using nothing more than a simple webpage. The webpage can be...... Listed under: Internet – Ethernet – LAN Projects, Projects, Video – Camera – Imaging Projects

116. Bike Speedometer using an Arduino Monitor your road speed using the Arduino. This project uses a magnetic switch (also called a reed switch) to measure the speed of one of the bike's wheels. The Arduino calculates the mph, and send this information out to the LCD screen on the handlebars...... Listed under: Metering – Instrument Projects, Projects

117. Waveform Generator using an Arduino Waveform generators (also called function generators) are useful for testing and debugging circuits. I often use them to test the frequency response of electronics components like op amp and sensors. This waveform generator is powered by an Arduino. It outputs four waveshapes: sine, triangle, pulse,...... Listed under: Metering – Instrument Projects, Projects

118. LED Matrix with Game Controller using an Arduino This project was built for my introductory electronics class at the University of Waterloo in Canada. This was my first introduction to electronics and therefore, my first project. Follow these steps to build a 16 x 16 LED array with a wall (different colored LED...... Listed under: LED Projects, Projects

119. Sous-vide Arduino Shield *NOTE* THIS PROJECT IS DONE BY A GROUP OF STUDENTS FROM SINGAPORE POLYTECHNIC Sous-vide (/suË Ë viË d/; French for "under vacuum")[1] is a method of cooking food sealed in airtight plastic bags in a water bath for a long time—72 hours in some cases—at an accurately determined...... Listed under: LCD Projects, Projects

120. Audio Output using an Arduino Generate sound or output analog voltages with an Arduino. This Instructable will show you how to set up a really basic digital to analog converter so you can start generating analog waves of all shapes and sizes from a few digital pins on an Arduino. ...... Listed under: Projects, Sound – Audio Projects

121. Audio Input using an Arduino Board Send sound into your Arduino. This Instructable will show you how to prepare audio so that it can be sampled and processed by an Arduino to make sound responsive projects and audio effects. (This article is a companion to another Instructable I've written about building...... Listed under: Projects, Sound – Audio Projects

122. DIY Arduino Motor Shield Today, I'm going to show you how to make an Arduino motor shield (driver) at a low cost. It works splendidly, its posses almost all the characteristics of the original Arduino motor shield. It's almost considered as a clone. The original Arduino motor shield has the...... Listed under: How To – DIY – Projects, Motor Projects, Projects

123. Arduino Board Step Sequencer I was wondering about on making a sequencer, a big 16 step sequencer was what I wanted to make. To it's full extension with lots of features including single leds for each step, midi input and output, etc. Then I realised that I should start from a...... Listed under: How To – DIY – Projects, Projects

124. Localizer with SIM908 module using Arduino The device is based on a GSM/GPRS module with included GPS. Its main function is to detect and communicate its own geographical position using, on the choice, the cellular phone reference system or the GPS. Its small dimensions are due to the use, for the...... Listed under: GPS Based Projects, Phone Projects, Projects

125. GSM GPS shield for Arduino Board Shield for Arduino designed and based on the module GSM/GPRS SIM900 or the GSM/GPRS & GPS module SIM908, to make calls, voice and data connections via GPRS. HARDWARE INNOVATIONS This new version (old Arduino GSM shield) has several new hardware features, that allow maximum customization...... Listed under: GPS Based Projects, Phone Projects, Projects

126. Easy Bluetooth Enabled Door Lock With Arduino + Android Thanks to everyone who supported this project and voted for it in the Arduino Challenge! I was awarded second prize and hope to participate in more Arduino contests in the near future. This tutorial will explain a simple way to make a password protected bluetooth...... Listed under: Arduino Android, Internet – Ethernet – LAN Projects, Projects

127. Beginners guide to building Arduino robots with Bluetooth and Android In this tutorial we are going to go over building a Arduino robot that can be controlled via bluetooth with an Android phone/tablet. This is a beginners guide that is going to briefly go over the process of wiring and programming your robot. Build list... The following is the list...... Listed under: Arduino Android

128. LINUSBot – Line Follower Robot using Arduino The operation of this Robot is quite simple. Infra-red sensors placed at the front of the chassis will monitor when our Robot is over a black line or when it is over a white background. In this project we will use the appropriate rounded chassis...... Listed under: Projects, Robotics – Automation Projects

This Post / Project can also be found using search terms:

- polygraph test newcastle