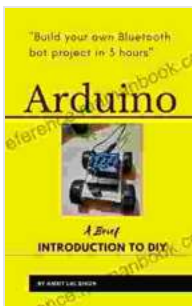


Build Your Own Bluetooth Bot Project In Hours

In this modern age of technology, robotics has become increasingly accessible to hobbyists and enthusiasts alike. With the advent of affordable microcontrollers and wireless communication modules, it is now possible to build a functional Bluetooth bot in just a matter of hours.

This comprehensive guide will take you through the exciting journey of building your own Bluetooth bot, step by step. We will cover everything from choosing the right components to programming the bot and controlling it with a smartphone app.



Arduino A Brief INTRODUCTION TO DIY: Build your own Bluetooth bot project in 3 hours by David Liss

★★★★☆ 4 out of 5

Language	: English
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Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Word Wise	: Enabled
Print length	: 40 pages
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Components Required

- Arduino Uno microcontroller
- Bluetooth module (HC-05 or HC-06)

- Motor driver (L298N or DRV8833)
- Two DC motors
- Battery pack (9V or 12V)
- Breadboard
- Jumper wires

Assembly

Once you have gathered all the necessary components, it is time to assemble the bot. Start by connecting the Arduino Uno to the breadboard. Then, connect the Bluetooth module to the Arduino using the following pinout:

- Bluetooth module VCC to Arduino 5V
- Bluetooth module GND to Arduino GND
- Bluetooth module TX to Arduino RX
- Bluetooth module RX to Arduino TX

Next, connect the motor driver to the Arduino using the following pinout:

- Motor driver VCC to Arduino 5V
- Motor driver GND to Arduino GND
- Motor driver IN1 to Arduino D5
- Motor driver IN2 to Arduino D6
- Motor driver IN3 to Arduino D7

- Motor driver IN4 to Arduino D8

Finally, connect the DC motors to the motor driver as follows:

- Motor A positive terminal to motor driver OUT1
- Motor A negative terminal to motor driver OUT2
- Motor B positive terminal to motor driver OUT3
- Motor B negative terminal to motor driver OUT4

Programming

Now that the bot is assembled, it is time to program it. Start by opening the Arduino IDE and creating a new sketch. Then, copy and paste the following code into the sketch:

```
int leftMotorSpeed = 0; int rightMotorSpeed = 0;
```

```
void setup(){pinMode(D5, OUTPUT); pinMode(D6, OUTPUT); pinMode(D7,  
OUTPUT); pinMode(D8, OUTPUT);
```

```
pinMode(10, INPUT); pinMode(11, OUTPUT);
```

```
leftMotorSpeed = 0; rightMotorSpeed = 0; }
```

```
void loop(){if (Serial.available() > 0){char data = Serial.read();
```

```
switch (data){case 'w': leftMotorSpeed = 255; rightMotorSpeed = 255;  
break; case 's': leftMotorSpeed = -255; rightMotorSpeed = -255; break;  
case 'a': leftMotorSpeed = 255; rightMotorSpeed = -255; break; case 'd':
```

```
leftMotorSpeed = -255; rightMotorSpeed = 255; break; case 'x':  
leftMotorSpeed = 0; rightMotorSpeed = 0; break; }}
```

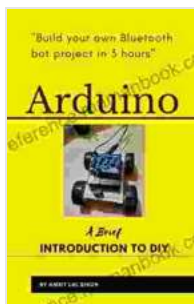
```
analogWrite(D5, leftMotorSpeed); analogWrite(D6, rightMotorSpeed);  
analogWrite(D7, rightMotorSpeed); analogWrite(D8, leftMotorSpeed); }
```

Once you have uploaded the code to the Arduino, open the Bluetooth app on your smartphone and connect to the bot. You should now be able to control the bot by sending commands over the Bluetooth connection.

Congratulations! You have now successfully built your own Bluetooth bot. This is just a basic example, and you can customize it in many ways to add additional features and functionality.

For example, you could add a sensor to the bot so that it can avoid obstacles. Or, you could add a camera so that you can control the bot remotely from your smartphone.

The possibilities are endless, so get creative and have fun with your new Bluetooth bot!



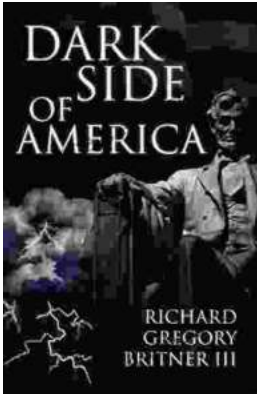
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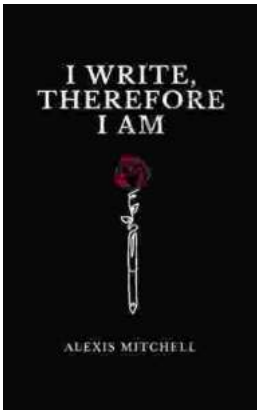
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