

## **Chapter 1 Sensors**

**Project 1: Photoresistor to Measure Light**

**Interactive Sensor Control**

**Going Forward**

## **Chapter 2 Basic Sensors**

**Project 2: A Simple Switch**

**An LED Needs a Resistor**

**Project 3: Buzzer Volume Control**

**Project 4: Hall Effect**

**Project 5: Firefly**

## **Chapter 5 Sensors and Arduino**

**Project 6: Momentary Push-Button and Pull-Up Resistors**

**Project 7: Infrared Proximity to Detect Objects**

**Project 8: Rotation (Pot)**

**Project 9: Photoresistor to Measure Light**

**Project 10: FlexiForce to Measure Pressure**

**Project 11: Measuring Temperature (LM35)**

**Project 12: Ultrasonic Distance Measuring (HC-SR04)**

**Conclusion**

## **Chapter 6 Sensors and the Raspberry Pi**

**Project 13: Momentary Push Button**

**Hello, Python World**

**Project 14: Blink an LED with Python**

**Project 15: Adjustable Infrared Switch**

## **Analog Resistance Sensors**

**Project 16: Potentiometer to Measure Rotation**

**Project 17: Photoresistor**

**Project 18: FlexiForce**

**Project 19: Temperature Measurements (LM35)**

**Project 20: Ultrasonic Distance**

## **Appendix Troubleshooting Tactics**

### **Appendix Arduino IDE Setup**

**Ubuntu Linux**

**Windows 7 and 8**

**OS X**

**Hello, World**

### **Appendix Setting Up Raspberry Pi**

**Parts**

**Set It Up**

**Using Raspberry Pi**

**Take Over an Onboard LED**

**Hello, GPIO: Connecting an External LED**

### **Appendix Bill of Materials**

**Chapter 1**

**Chapter 2**

**Chapter 3**

**Chapter 4**