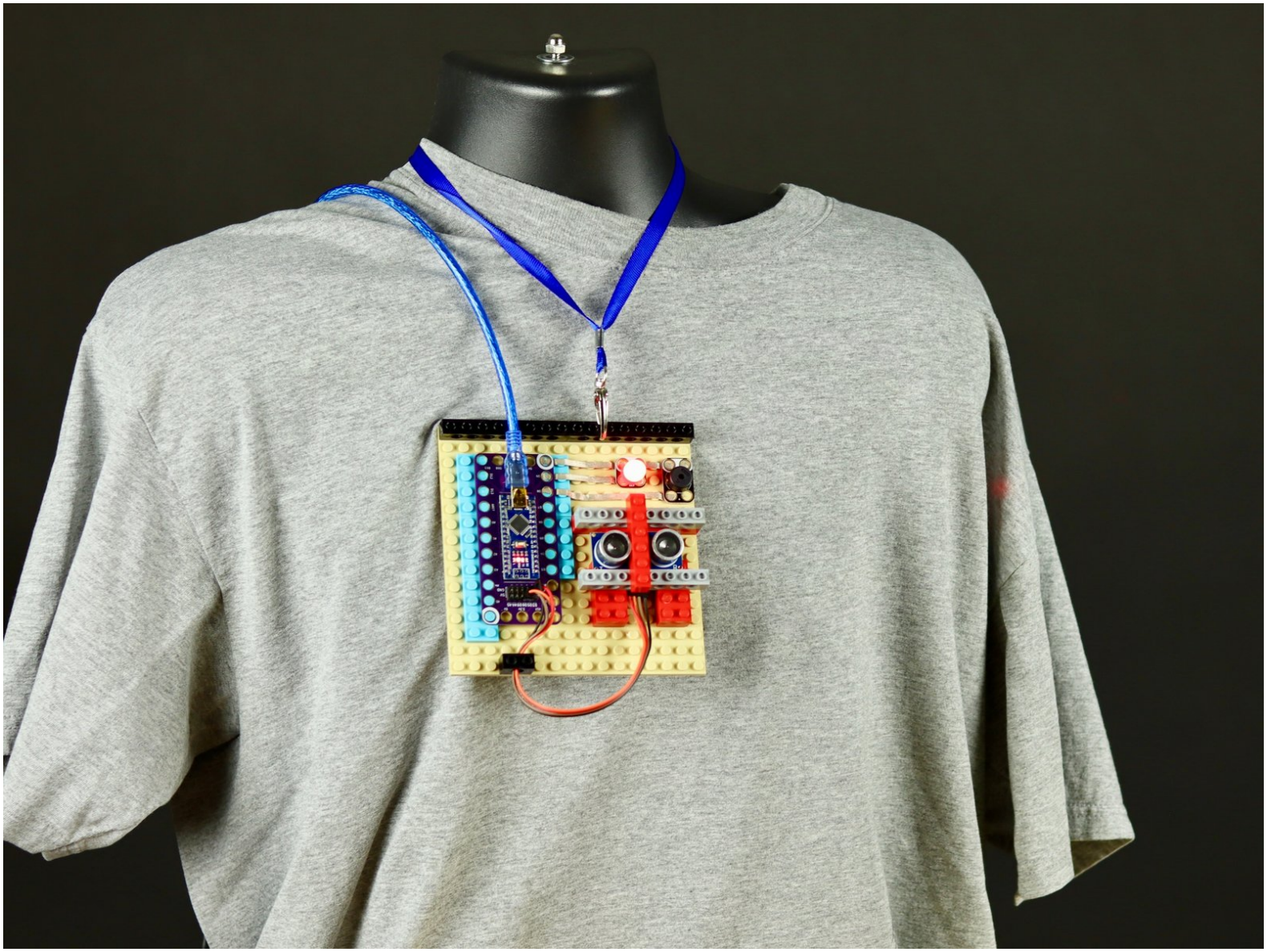
'Don't Touch Me' Anti Virus Alarm

Written By: Joshua



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INTRODUCTION

Keep other people away with this handy wearable alarm! Using a distance sensor we're able to keep other people six feet away from us. As people approach you this project starts flashing at an increased rate followed by an annoying alarm. Create this project using a Crazy Circuits Robotics Board or Arduino of your choice.

PARTS:

- Crazy Circuits Robotics Board (1)
- Crazy Circuits Piezo Speaker Chip (1)
- Crazy Circuits LED Chip (1)
- Maker Tape (1)
- LEGO Bricks (1)
- Ultrasonic Distance Sensor (1)

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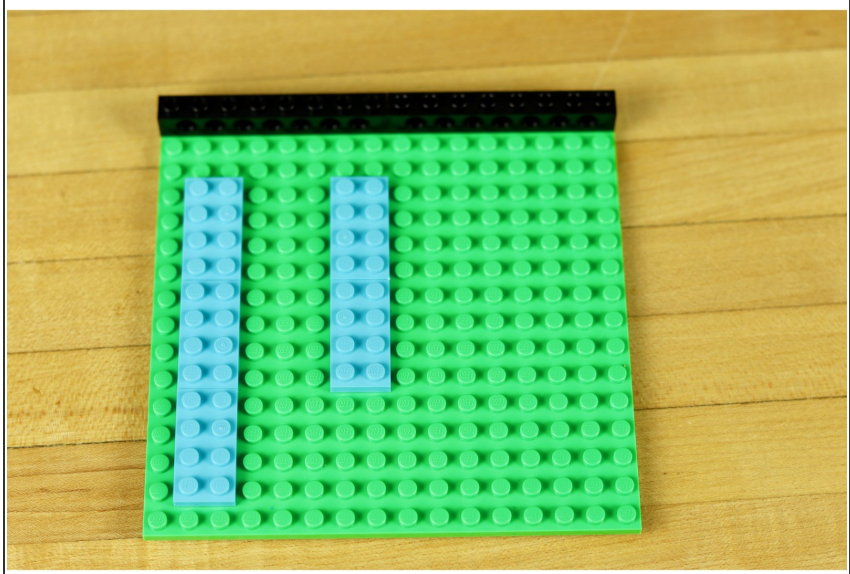
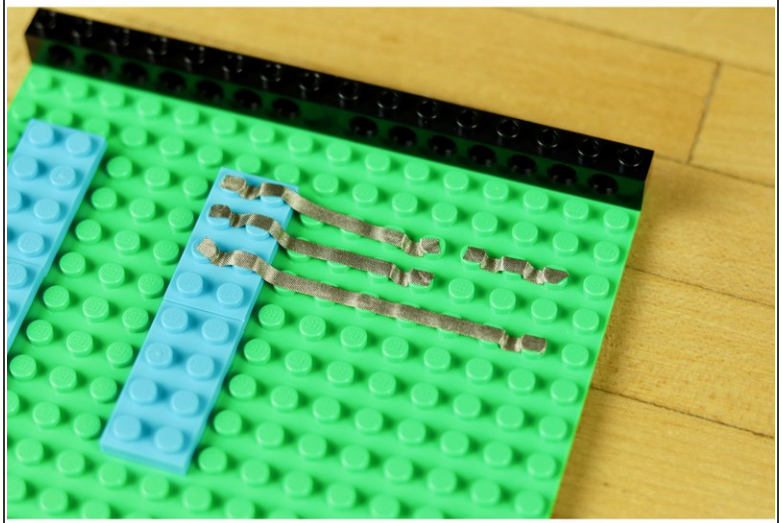
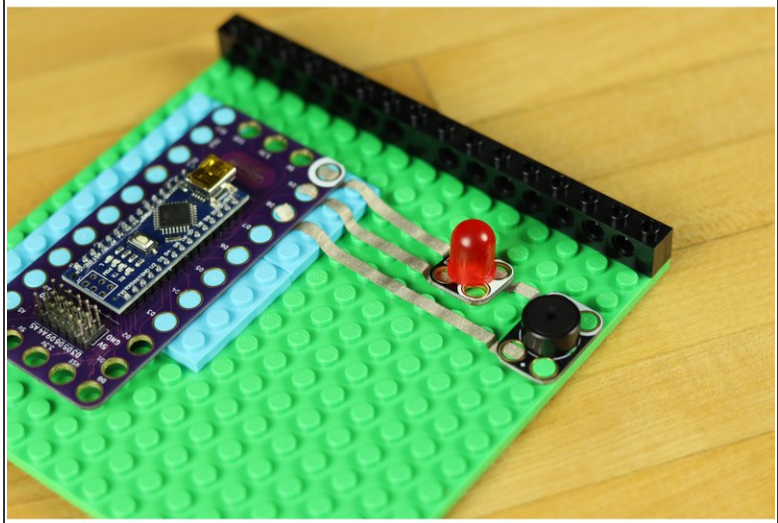
Step 1 — Lay Out LEGO and Parts



- Start with a large LEGO base plate. We used a 16 x 16 plate.
- Drop down some 1x6 or 2x6 plates to make a platform for the Robotics Board.

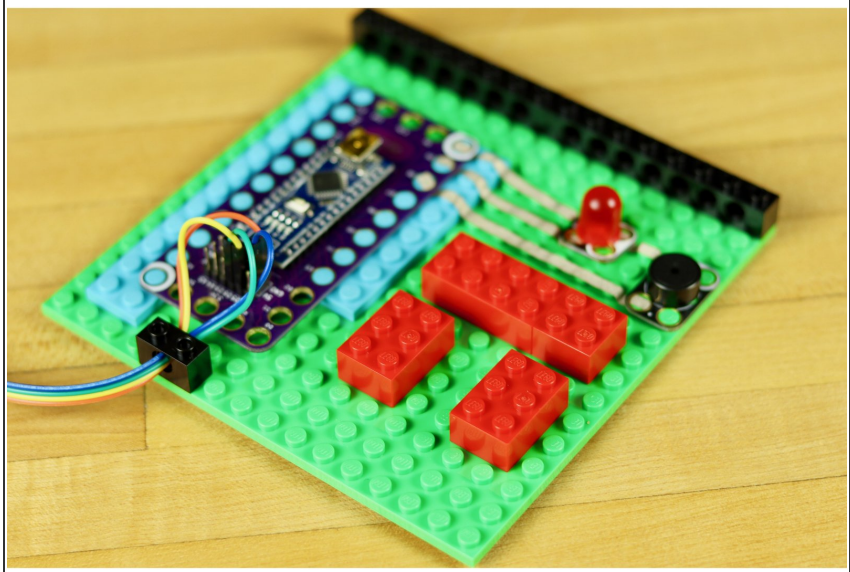
Step 2 — Apply Tape and Components





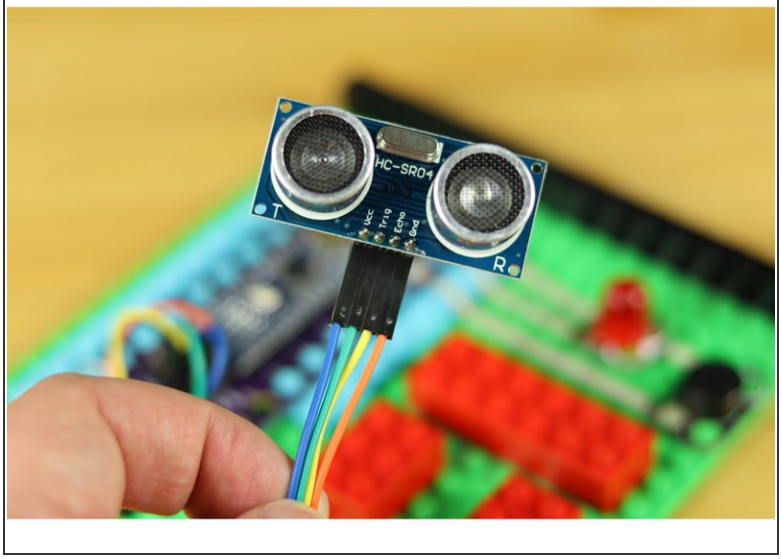
- Lay down tape to connect the Robotics Board to the LED and Piezo Speaker.
- Refer to the diagram as a wiring reference.
- Once everything is set add the parts.

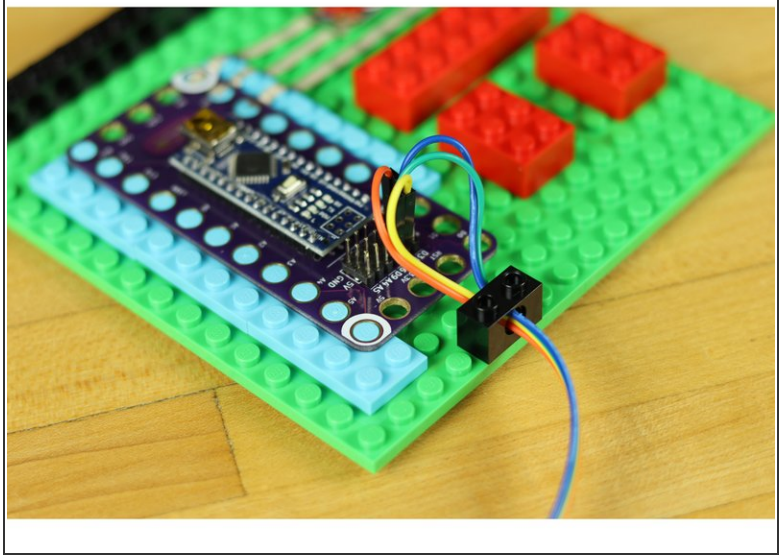
Step 3 — Build a Sensor Holder



- Use some 2x3 LEGO pieces to make a simple sensor holder.

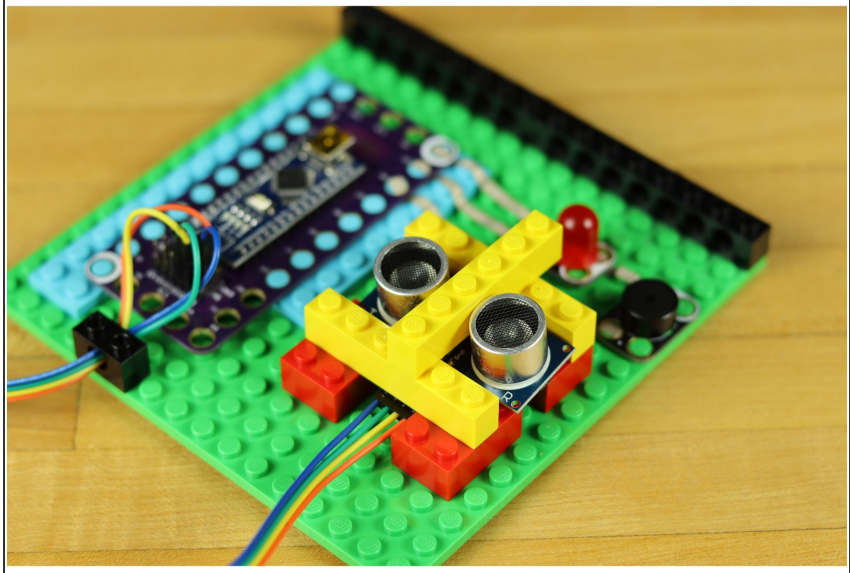
Step 4 — Wire Up The Sensor





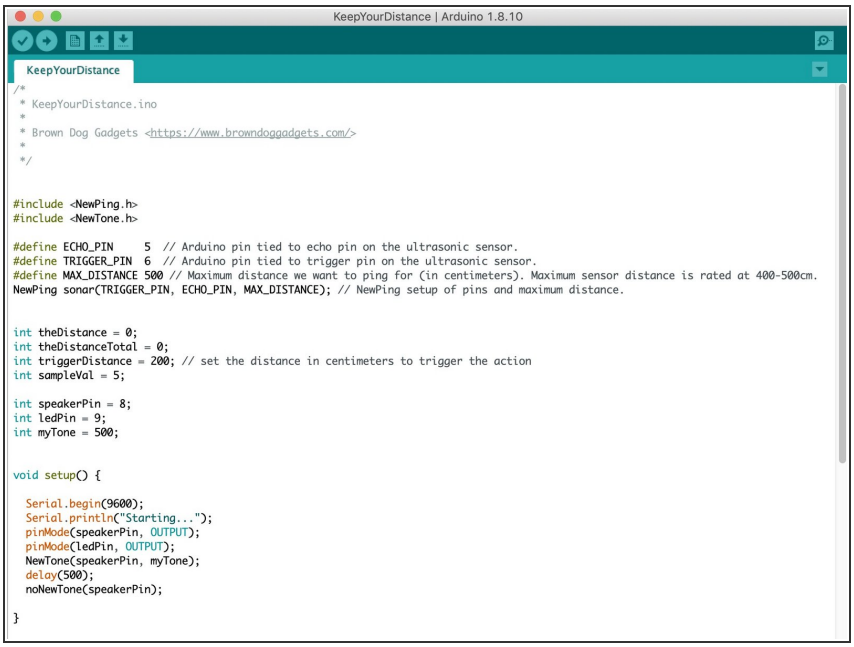
- Connect a Female to Female ribbon cable between the Sensor and Robotics Board.
- We use a 1x2 LEGO Technic brick as a strain relief. It was a tight fit.
- The Trigger Pin connect to D5, the Echo Pin connects to D6

Step 5 — Secure Range Finder



- Use some additional LEGO bricks to secure the range finder in place.
- We also added some LEGO Technic bricks to the top of the project in order to attach a lanyard.

Step 6 — Upload Code




```
/*
 * KeepYourDistance.ino
 *
 * Brown Dog Gadgets <https://www.browndoggadgets.com/>
 *
 */


#include <NewPing.h>
#include <NewTone.h>

#define ECHO_PIN     5  // Arduino pin tied to echo pin on the ultrasonic sensor.
#define TRIGGER_PIN  6  // Arduino pin tied to trigger pin on the ultrasonic sensor.
#define MAX_DISTANCE 500 // Maximum distance we want to ping for (in centimeters). Maximum sensor distance is rated at 400-500cm.
NewPing sonar(TRIGGER_PIN, ECHO_PIN, MAX_DISTANCE); // NewPing setup of pins and maximum distance.


int theDistance = 0;
int theDistanceTotal = 0;
int triggerDistance = 200; // set the distance in centimeters to trigger the action
int sampleVal = 5;

int speakerPin = 8;
int ledPin = 9;
int myTone = 500;


void setup() {

  Serial.begin(9600);
  Serial.println("Starting...");
  pinMode(speakerPin, OUTPUT);
  pinMode(ledPin, OUTPUT);
  NewTone(speakerPin, myTone);
  delay(500);
  noNewTone(speakerPin);

}
```

- [Download or Copy the Arduino Code from our GitHub Repo.]
- As always, choose the appropriate port in the Arduino Software and choose Arduino Nano as the board being used.
- You'll also need the NewTone_V1.0 Library to get this project working. That can also be found in our GitHub repo as a downloadable ZIP file.
- Upload Code.