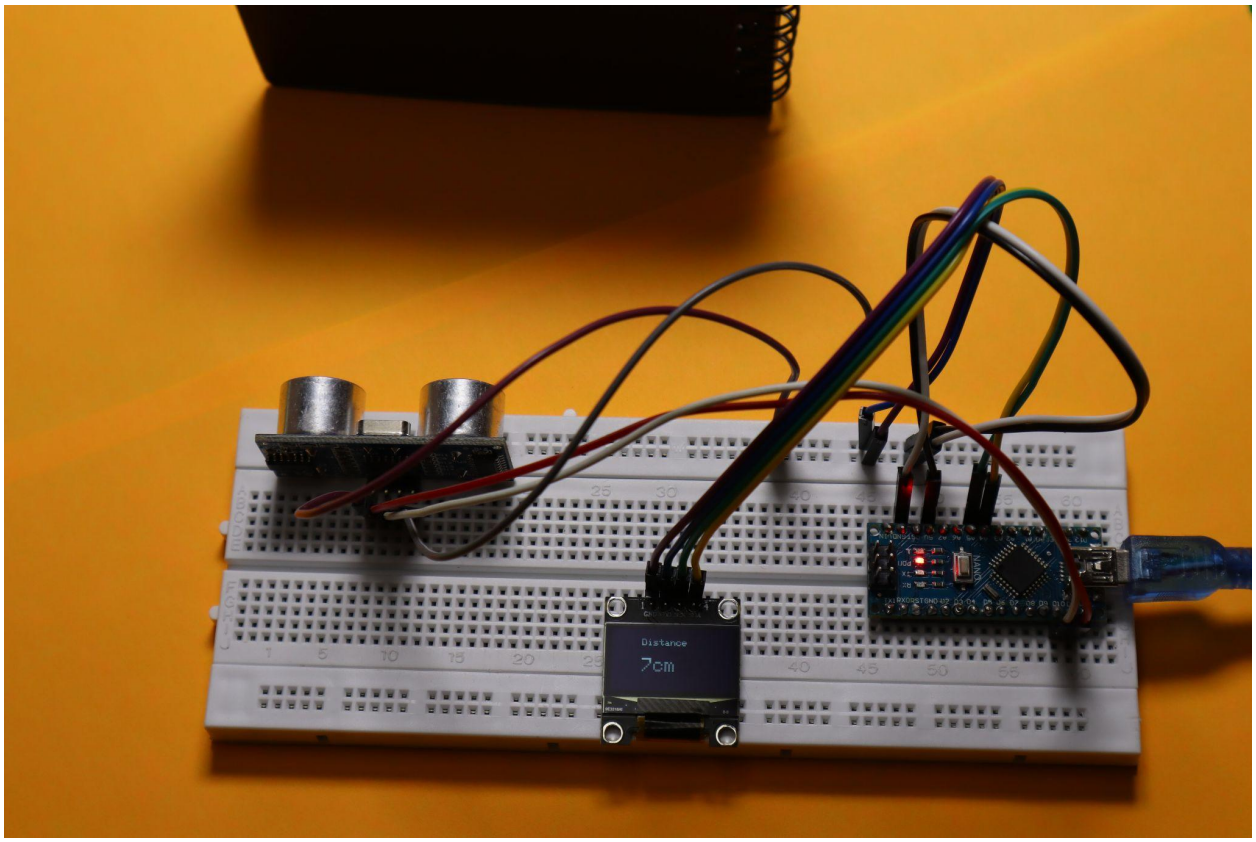
Robotix.io

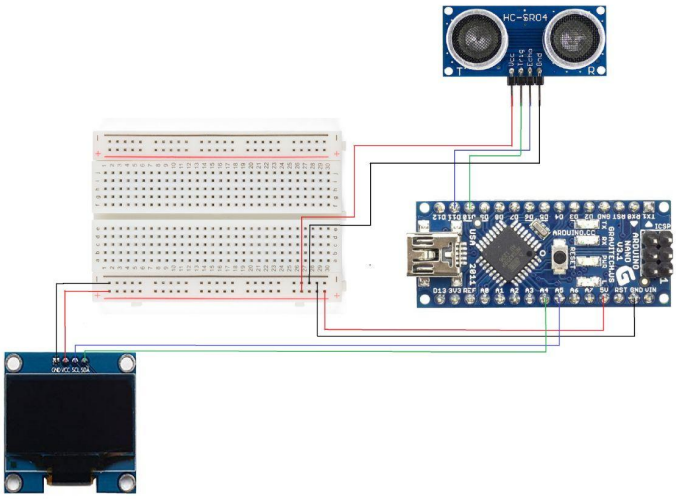
Interfacing of Ultrasonic Distance Sensor with Arduino Nano

Material Required 🧰 :

1. Arduino Nano + Cable https://amzn.to/3M2Enfg
2. Breadboard https://amzn.to/3y5IQrO
3. Ultrasonic sensor https://amzn.to/3y9jau7
4. I2C 128X64 OLED display https://amzn.to/3eg9Hdt
5. Connecting wires (M-M) https://amzn.to/3cl97EY



Circuit Diagram ⚡ :



Code 💻 :

```
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>

#define SCREEN_WIDTH 128 // OLED display width, in pixels
#define SCREEN_HEIGHT 64 // OLED display height, in pixels

// Declaration for an SSD1306 display connected to I2C (SDA, SCL pins)
Adafruit_SSD1306 display(SCREEN_WIDTH, SCREEN_HEIGHT, &Wire, -1);


#define trigpin 10
#define echopin 11



int dist;
int durat;



void setup()
{
```

```
  if(!display.begin(SSD1306_SWITCHCAPVCC, 0x3C)) { // Address 0x3D for
128x64
    Serial.println(F("SSD1306 allocation failed"));
    for(;;);
  }
  delay(2000);
  display.clearDisplay();
pinMode(trigpin,OUTPUT);
pinMode(echopin,INPUT);
pinMode(5,OUTPUT);
Serial.begin(115200);
}

void loop()
{
   display.clearDisplay();

digitalWrite(trigpin,LOW);
delay(2);
digitalWrite(trigpin,HIGH);
delay(10);
digitalWrite(trigpin,LOW);

durat=pulseIn(echopin,HIGH);

dist = durat * 0.0342/2;

Serial.print("Distance=");

 Serial.println(dist);

  display.setTextSize(1);
  display.setTextColor(WHITE);
  display.setCursor(32, 10);
  // Display static text
  display.println("Distance ");
  display.setTextSize(2);
  display.setTextColor(WHITE);
  display.setCursor(32,30);
  display.print(dist);
  display.println("cm");
```

```
  display.display();


}
```