

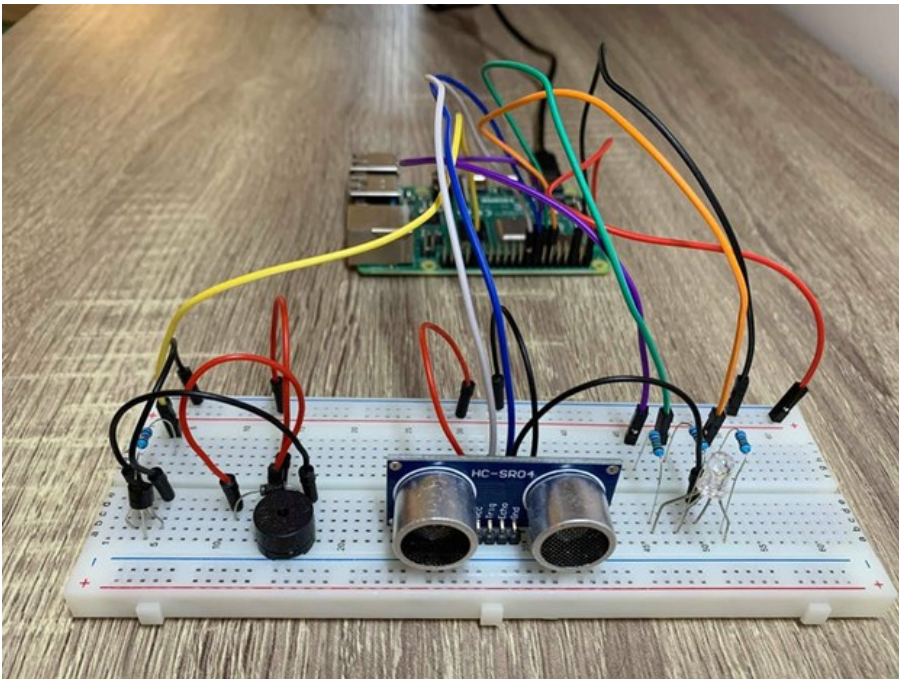
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**Title:** Social distancing sensor
























**Elevator pitch:** By using the sensor, when you get too close it will warn you by making a sound and changing the led color.

**Cover image:**



**Things used in this project**

## Hardware components

	RGB Diffused Common Cathode	× 1	
	Ultrasonic Sensor - HC-SR04 (Generic)	× 1	
	Buzzer	× 1	 
	Breadboard (generic)	× 1	 
	Male/Female Jumper Wires	× 8	 
	Male/Male Jumper Wires	× 6	 
	Resistor 1k ohm	× 1	
	Through Hole Resistor, 150 ohm	× 3	
	General Purpose Transistor NPN	× 1	
	1N4007 – High Voltage, High Current Rated Diode	× 1	

## Software apps and online services

	Raspbian		
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## Story

Nowadays, because of the pandemic, we will have to be more careful when it comes to the distance between us and other people. By using our project, you will always be warned when someone is too close to you.

## How it works:

The device is set to react when an object/person is "**close**" (< 75 cm) or "**too close**" (< 25 cm).

The "**close**" mode activates the buzzer and turns the RGB led into the blue light. The "**too close**" mode, makes the buzzer sounds more disturbing and turns the RGB led into the red light. While the distance between the persons is bigger than 75 centimetres, the light will be green and the buzzer will play a song, for letting you know that there is no one too close to you.

## Library:

For our project we've used the pigpio library which is installed in the following steps:

· first download and install the latest version:

```
wget https://github.com/joan2937/pigpio/archive/master.zip
```

```
unzip master.zip
```

```
cd pigpio-master
```

```
make
```

```
sudo make install
```

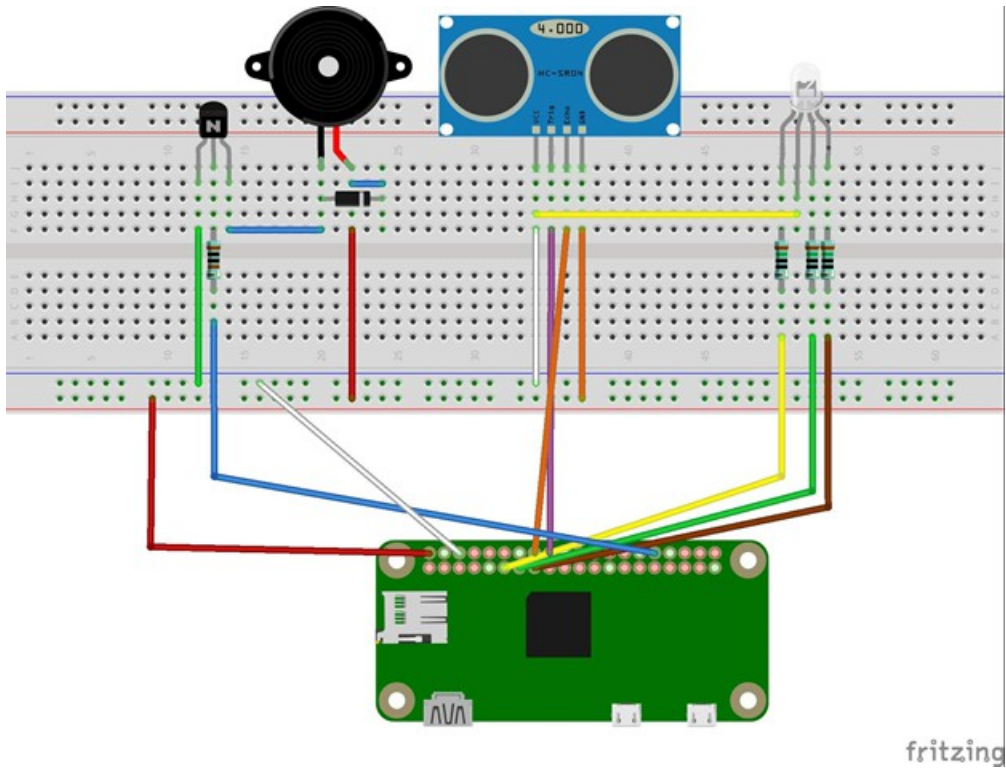
· before you run the code, you need to start the pigpio daemon

```
sudo pigpiod
```

for running the code use the following command :

```
python3 project.py
```

### Schematics



**Code:** [https://github.com/andreea967/smProject/blob/master/project.py?fbclid=IwAR2XGN041ZThyWr-Ws\\_GK6RuQhzOz1PcJynrFTEEdhayp4Zs\\_dKkWrg8vKQ](https://github.com/andreea967/smProject/blob/master/project.py?fbclid=IwAR2XGN041ZThyWr-Ws_GK6RuQhzOz1PcJynrFTEEdhayp4Zs_dKkWrg8vKQ)

**Video:** [https://www.youtube.com/watch?v=7YDZ-VO0cK0&fbclid=IwAR0-WcG\\_Ukb5AXbTzAoBogPka78fF1H026WFpFF8CnOuMAu9aCL-\\_bKTFCA](https://www.youtube.com/watch?v=7YDZ-VO0cK0&fbclid=IwAR0-WcG_Ukb5AXbTzAoBogPka78fF1H026WFpFF8CnOuMAu9aCL-_bKTFCA)

**Hackster:**

[https://www.hackster.io/mihaila-andreea/social-distancing-sensor-562e08?  
fbclid=IwAR1UX7olh\\_cozhbgIHA9wGkLy7RcaGdZkBZmaNFsShcyvWPKAj5dYi8g-O4](https://www.hackster.io/mihaila-andreea/social-distancing-sensor-562e08?fbclid=IwAR1UX7olh_cozhbgIHA9wGkLy7RcaGdZkBZmaNFsShcyvWPKAj5dYi8g-O4)