

## CSCE 462 One Pager

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**Title:** Social Distancing Detector

### **Summary:**

The purpose of this system is to monitor the well-beings of people while COVID-19 pandemic is still present. It is a challenge for society to monitor the ways of preventing the spread of the virus, but as the world adapts common guidelines to decrease the risk, our system will aid in monitoring social distancing. The system will be a portable device that utilizes OpenCV to filter out objects and detect human presence. This portion of the system will be combined with an ultrasonic distance sensor to determine the distance between the user and the person approaching. After the detection of an oncoming human and the measured distance is under 6ft, the system will alert the user by sending a signal/pulse into our circuit that causes an alarm/buzzer to go off.

### **Expected Results:**

The expected results of our social distancing detector are that we intend to promote COVID-19 safety regulations within the constraints of resuming everyday life. Given the scenario of how our system will function optimally, it would involve 2 humans interacting in close vicinity (within 6ft). Whenever the 2 humans engage in close approximation, not only will our system notify the user, but alert the other human.

### **Materials Needed:**

- Raspberry Pi Board
- Breadboard
- High-frame rate External Webcam
- Adafruit Ultrasonic Distance Sensor
- Wires
- Power Supply
- Buzzer/Audio output device