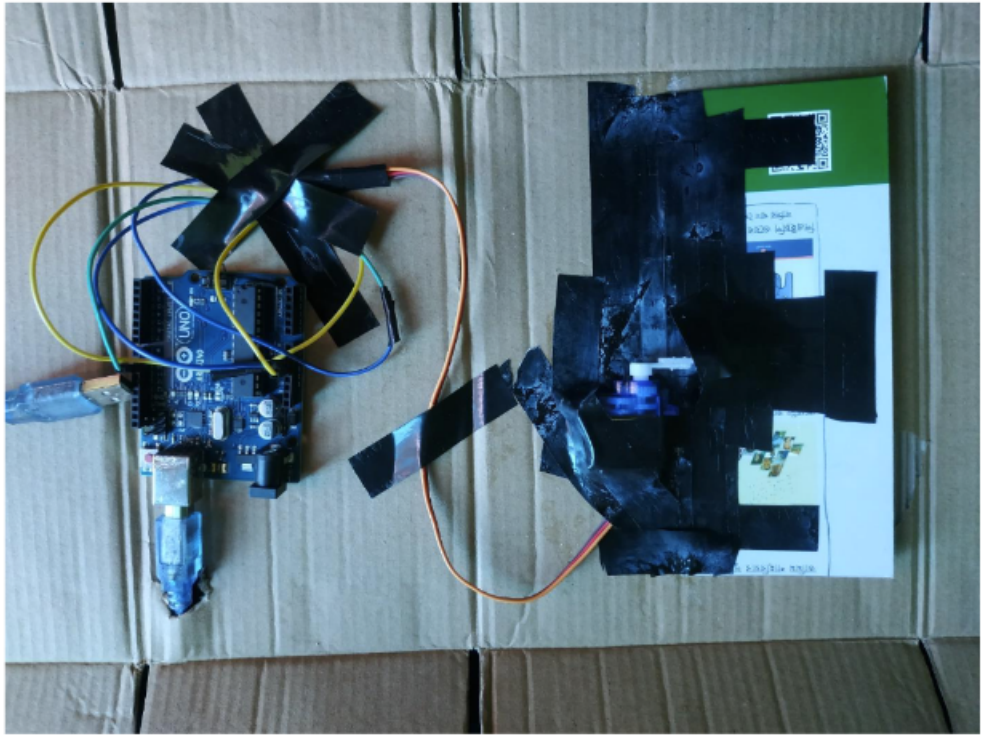
Face Mask Detection

Face Mask Detection for a Virus Research Lab

Project View:

Frontend View

Project View



Backend View

Project Outline:

- The project has been made to make door more protective for a Virus Research Lab.
- User can use their face mask to unlock the door
- It can be used smoothly
- The code has been made using Python language and C Language in Arduino
- Servo Motor has been used for show the Demo of the Door.

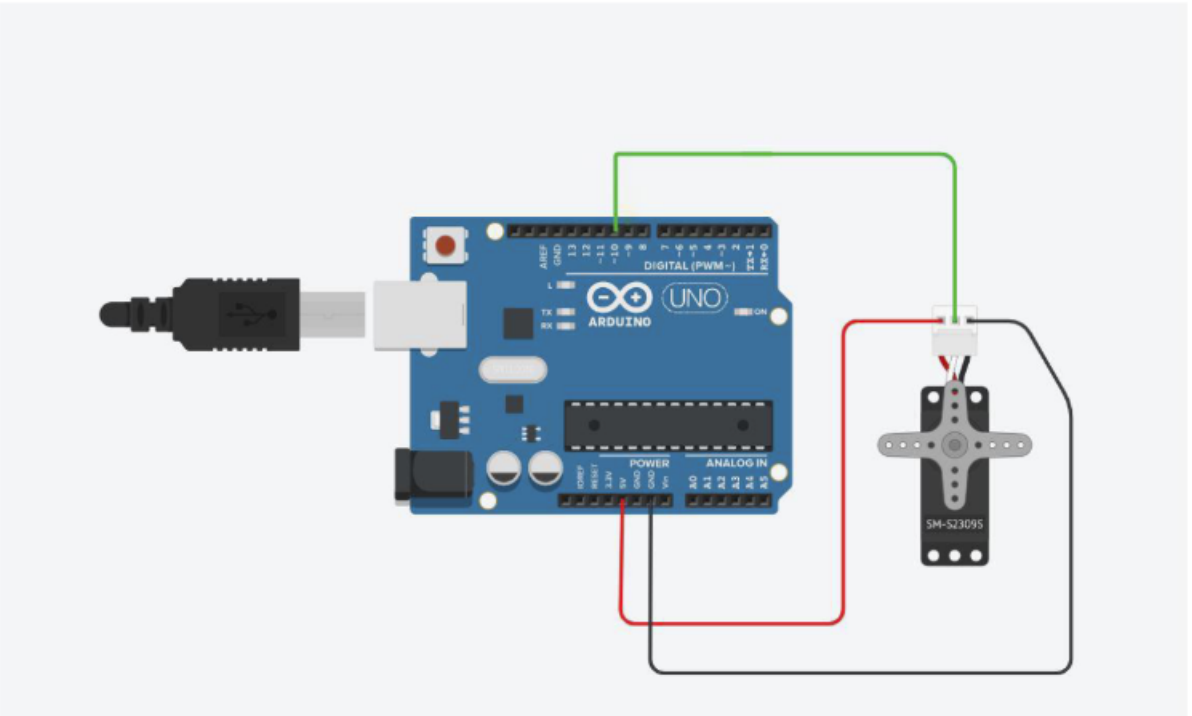
Required Component:

1. Arduino Uno
2. Servo Motor
3. Male to Male Wire
4. One USB Cable
5. One Paper Made Box

Required Python Libraries:

1. Open-Cv
2. keras
3. numpy
4. Tensorflow
5. Pyfirmata

Circuit Diagram :



The circuit Diagram is given at the left. The Servo Motor Signal Pin will be Connected to the Arduino Pin Number 10. The 5V pin will be connected to Arduino 5V pin and Ground pin will be connected to Arduino Ground pin. Arduino must be connected to PC through Arduino Cable.

Functional Preview:

- At first the python code will be write on any of the python IDE than Arduino code will be uploaded to Arduino Uno board using Arduino IDE and then Run the 1st python code it will collect the sample pictures and then run 2nd code and it will start the webcam and take pictures , if the picture match with database up to 80% then it will send a character to the Arduino and Arduino will move the servo motor for 5 seconds.

Thank you!