GROUP 10

MRS. PADMAVATI

PIYUSH SHARMA - 17103110

NAMAN MITTAL - 17103103

SUMUKH BHARDWAJ - 17103051

AADRIT AGGARWAL - 17103052

NARENDER - 17103059
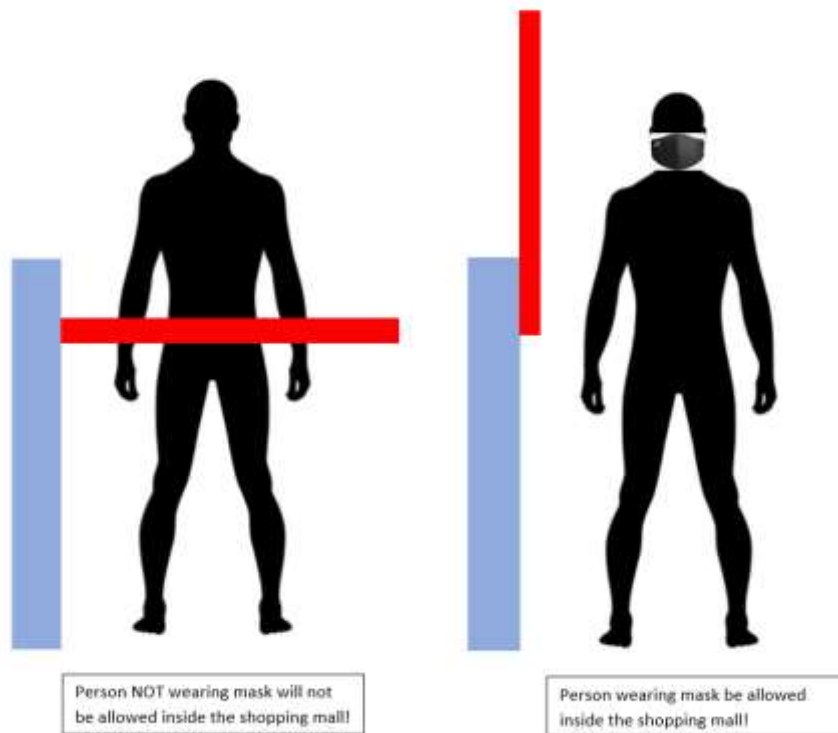
MASK DETECTOR WITH STOPPER

ABSTRACT

Objective: Knowledge about transmission of the COVID-19 virus is accumulating every day. COVID-19 is primarily a respiratory disease and according to the current evidence, COVID-19 virus is primarily transmitted between people via respiratory droplets and contact routes which occurs when a person is in close contact with an infected person.

Thus, WHO has advised the use of masks as a part of a comprehensive package of the prevention and control measures that can limit the spread of certain respiratory viral diseases, including COVID-19. Masks can be used either for protection of healthy persons or for source control (worn by an infected individual to prevent onward transmission).

However, shopping mall being a public place, anyone can walk inside a it, be it is wearing a mask or not. This may be dangerous for people as they will become vulnerable to diseases like COVID-19. Thus, we decided to come up with a solution which will tell if a person is wearing a mask or not, and will stop the person from entering inside the mall.

Functionalities: The functionalities are very simple:

If a person entering the mall is not wearing a mask, then the stopper will stop the person from entering the mall. Else, it will allow it to enter. The following picture depicts the complete functionality:

Person NOT wearing mask will not be allowed inside the shopping mall!

Person wearing mask be allowed inside the shopping mall!

Technologies to be Used: To build this project, we are supposed to train out our model on a dataset. Right now, we are using a dataset of 12000 images, on which we will apply Deep Learning (precisely Convolution Neural Network) and Computer Vision using the programming language Python 3. Also, then, we are supposed to use the Arduino coding to create this stopper.

Performance Metric to Judge the Project: The performance will be judged in real time, when the user will try to enter the mall with and without mask both. Different types of masks and different ways of wearing it right or wrong can be checked this way. The software should give a positive output only if the person is wearing the mask correctly.

The following ways will be checked if a person is wearing a mask but incorrectly:

- ✅ Denotes that the person should be allowed to enter the Mall
- ❌ Denotes that the person should be stopped by the stopper.

However, if a person is not wearing a mask, false output should be there (i.e. the person should be stopped by the stopper). The performance will be judged accordingly.