

## Detection of different colored Face Masks (Red, Green, Black, and Blue) using YOLOv4 algorithm

I collected the dataset from kaggle and google images. I used a user interface called LabelImage to make YOLOv4 labels on the images, which converted it into annotations in text files. The labels I made are blue mask, black mask, green mask and red mask. I made a zip file of the train dataset and validation dataset. I created an obj.names file consisting of the labels and an obj.data file consisting of the path to the train file, test file and backup folder. First installed darknet then CUDA in my google collab and then mounted my google drive folder with the google collab file. Then I uploaded the files in my google drive folder then into the virtual machine of google collab. Then I downloaded the pre-trained weights for the convolutional layers. Then I trained the dataset using the following command below. I waited till both the average loss came nearer to the value of 2. Then I ran the custom detector on an image, which then made a prediction on the image. I kept the threshold of detection to 0.1 for accurate prediction.

```
!./darknet detector train data/obj.data cfg/yolov4-obj.cfg yolov4.conv.137  
-dont_show -map
```

## Output



