FACE MASK DETECTION
SUMMARY

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In order to train this dataset I used a pre-trained model “MOBILE NET”, which we call this process as Transfer learning, where I removed the prediction layer for this model. I used ‘IMAGENET’ which helps to enhance the model to avoid problems like ovefit and less accurate situations. Each images is resized into 244*224 dimension. Another main important aspect I used to avoid overfit is DATA AUGMENTATION. By using IMAGE DATA GENERATOR present in

“tf.keras.preprocessing.image.ImageDataGenerator”

I generated augmented images.

```
“aug = ImageDataGenerator(

        rotation_range = 20,
        zoom_range = 0.15,
        width_shift_range = 0.2,
        height_shift_range = 0.2,
        sheer_range = 0.15,
        horizantal_flip = True,
        fill_mode = ‘nearest’
)”
```

At the model hierarchy we included a mobile-net model, next I added *AveragePooling2D(), Flatten(), Dense(), Dropout()* layers. Prediction layer contains 2 neurons with *‘softmax’* as activation function.
In model compile, *adam* with *learning rate 0.0001*, *binary_crossentropy* is used as loss function, accuracy is used as metrics.

Network is trained at 5 epochs, It achieved an accuracy of 0.9806 and val_accuracy of 0.9883, loss is 0.0620, val_loss is 0.0403