MVB

`Face-mask-detection`

Features:

Our face mask detector doesn't use any morphed masked images dataset and the model is accurate. Owing to the use of architecture, it is computationally efficient, thus making it easier to deploy the model to embedded systems
This system can therefore be used in real-time applications which require face-mask detection for safety purposes due to the outbreak of Covid-19. This project can be integrated with embedded systems for application in airports, railway stations, offices, schools, and public places to ensure that public safety guidelines are followed.

A project is a web application based on the Django framework
It uses machine learning to teach a system to be able to detect a face mask

Dataset

The dataset used can be downloaded here

This dataset consists of **4098images** belonging to two classes:

- **with_mask: 2050 mages**
- **without_mask: 20498images**

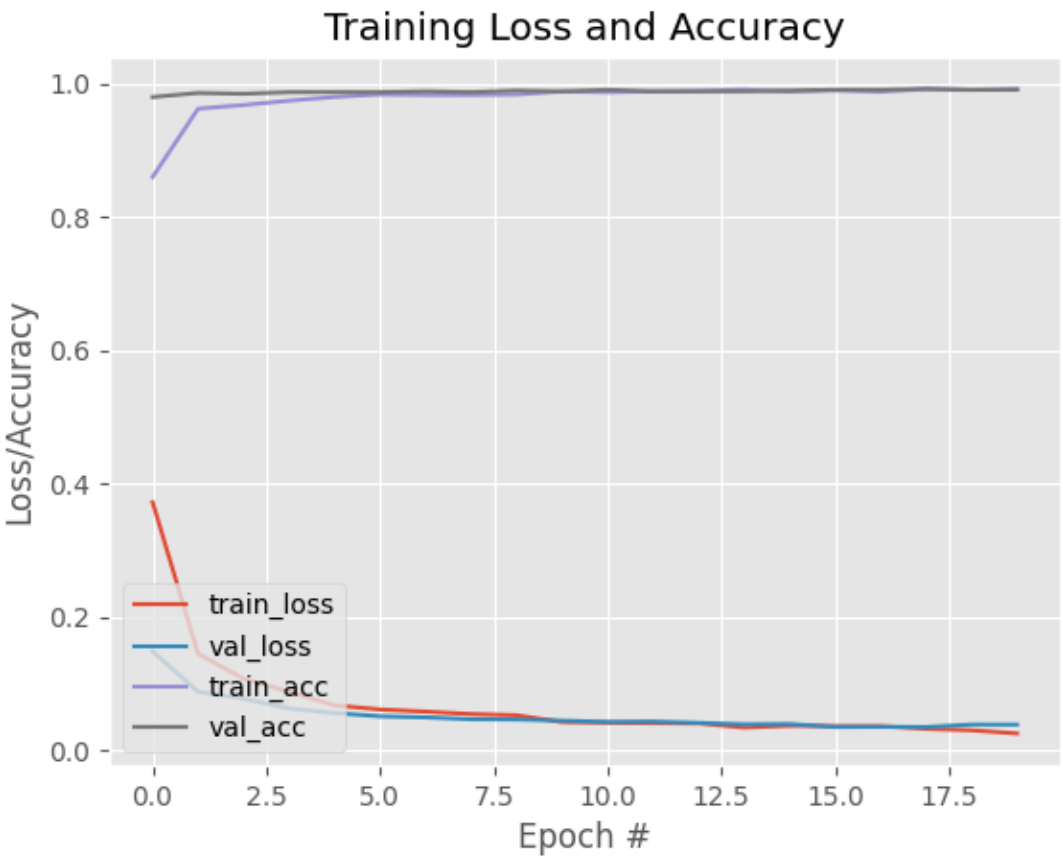
Languages & Library

Python
Pandas
Numpy
Seaborn
Sklearn
CNN
Keras
Tensorflow

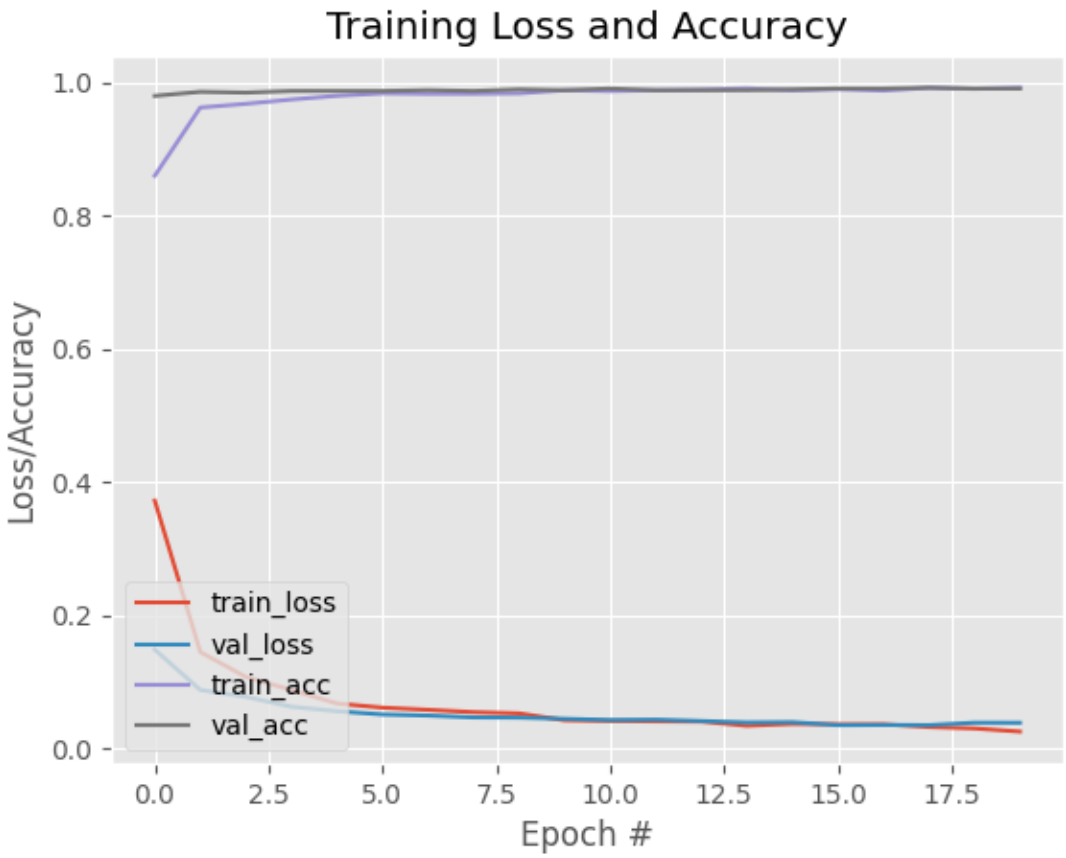
+Django
+ html
+ css
+ javascript

Results

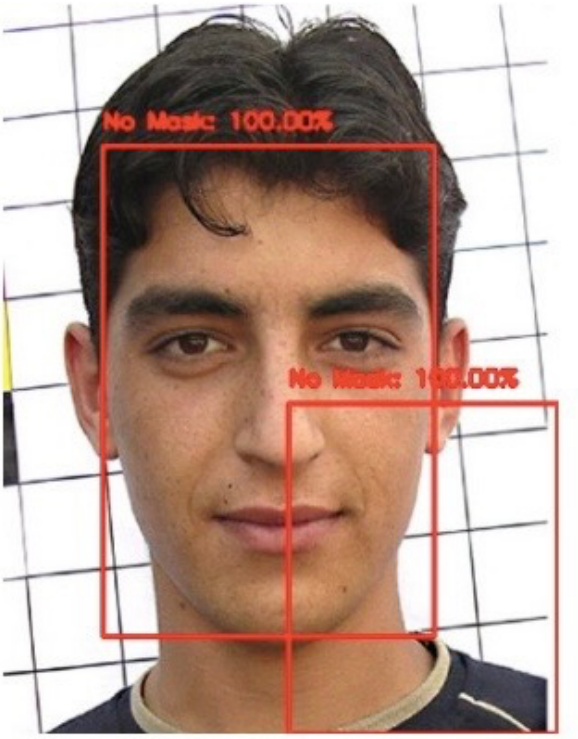
Our model gave 98% accuracy for Face Mask Detection



/loss training curve plot


Training Loss and Accuracy
Loss/Accuracy
Epoch #
train_loss
val_loss
train_acc
val_acc
1.0
0.8
0.6
0.4
0.2
0.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

Images:


No Mask: 100.00%