FACE MASK DETECTOR USING COMPUTER VISION AND DEEP LEARNING IN PYTHON

TEAM NAME: Champions

Team Members:	Phone Numbers:
SWETHA S(LEADER)	9384472153
RITHIKA S	9361955458
SINDHU N R	9986591666
SNEHA T	6374925085
SOWMIYA S	9353335714

DOMAIN: IMAGE PROCESSING

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ABSTRACT:

- The respiratory droplets and physical contact are the two main routes of transmission of the COVID-19 virus according to World Health Organization.
- Medical masks are described in this study as surgical or procedure masks that are flat or pleated (some are shaped like cups); they are attached with straps to the head.
- They are tested for controlled high filtration, proper breathability and optionally, resistance to fluid penetration.

TECHNOLOGICAL STACK:

1.TensorFlow

2.Keras

3.PyTorch

4.Caffee

5.MxNet

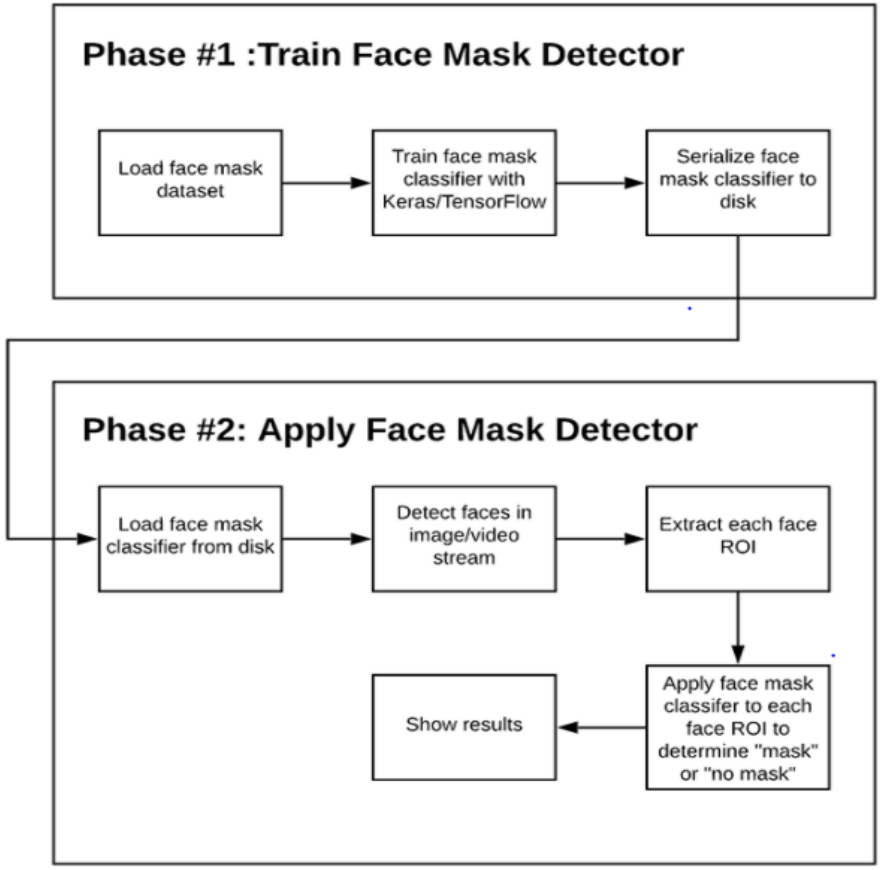
6.Cognitive ToolKit from Microsoft

We use PyTorch since it runs on Python.

- PyTorch DataLoader-used to load information from the Image Folder
- The PyTorch DataSets ImageFolder is used to locate image sources
- Pytorch Transforms, when reading from the source folder.
- PyTorch Device – identifies the running system capabilities
- Pytorch TorchVision – it will help us to load the libraries which are created before
- PyTorch nn – This module helps us to build our own Deep Neural Network (DNN) models.
- PyTorch Optim – help us to define the model optimizer
- Pytorch PIL – helps to load the image from the source
- PyTorch AutoGrad – it provides automatic differentiation for all operations on Tensors

SOFTWARE IMPLEMENTATION:

TWO-PHASE COVID-19 FACE MASK DETECTOR



BUSINESS SCOPE:

- Airports
- Hospitals
- Workplaces
- Government buildings.

CONCLUSION:

- The accuracy of the model is around 60%, the optimi
  continuous process.MobileNetV2 was used to build th
  the same. This specific model could be used as a use

REFERENCE

- Ideas2It -https://www.ideas2it.com/blogs/face-mask-detector-using-deep-learning-pytorch-and-computer-vision-opencv/
- Real-Time Face Mask Detector with Python, OpenCV, Keras
- pyimgsearch-COVID 19 face detector using open CV
- github chandrikadeb-face mask detection

THANKYOU