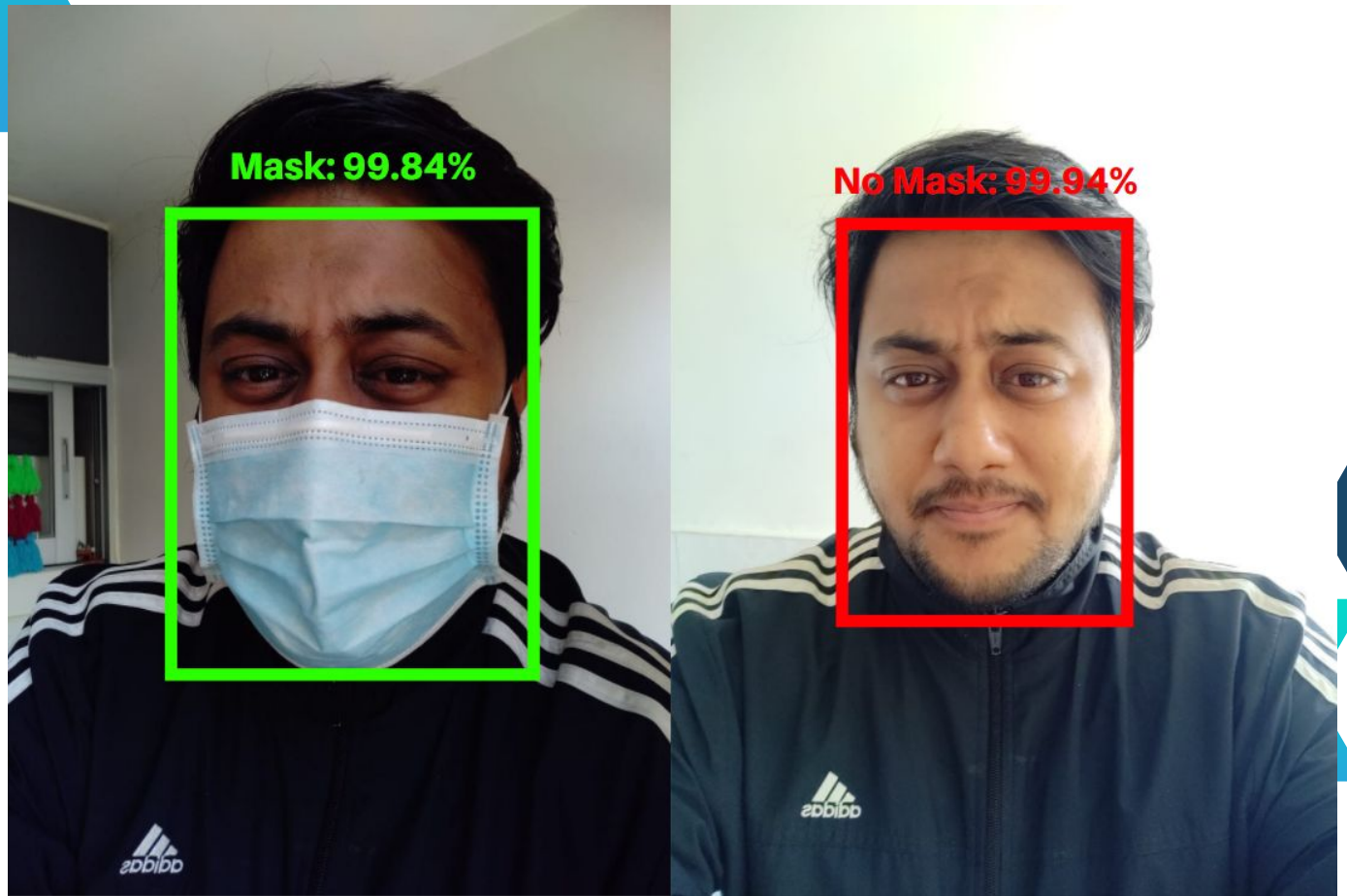
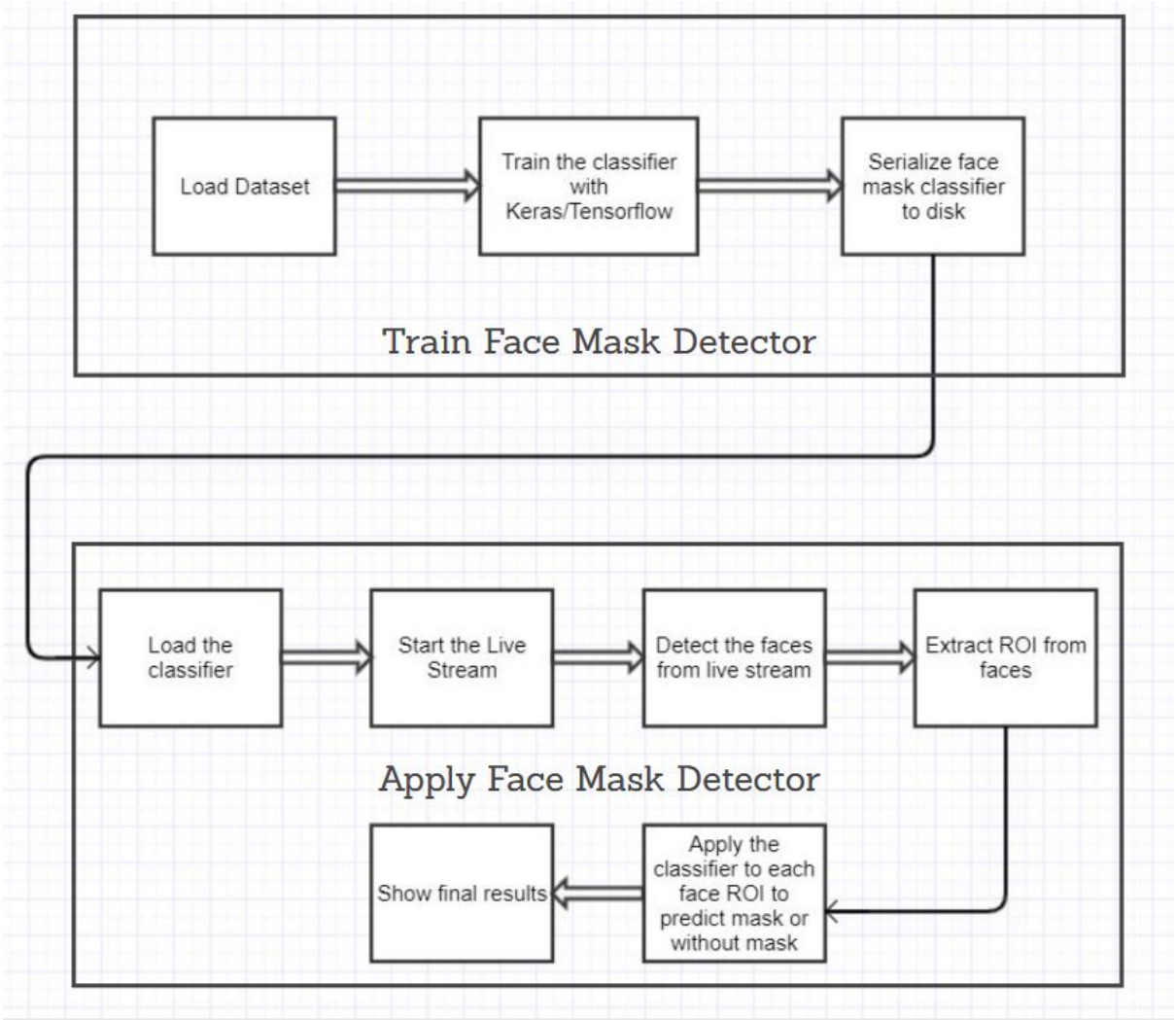
COVID-19
FACE MASK DETECTION

Model Output




Load Dataset
Train the classifier with Keras/Tensorflow
Serialize face mask classifier to disk
Train Face Mask Detector
Load the classifier
Start the Live Stream
Detect the faces from live stream
Extract ROI from faces
Apply Face Mask Detector
Show final results
Apply the classifier to each face ROI to predict mask or without mask

Mask

No Mask

How the dataset was created

Code Credits: Prajna Bhandary

Techniques used to create images:

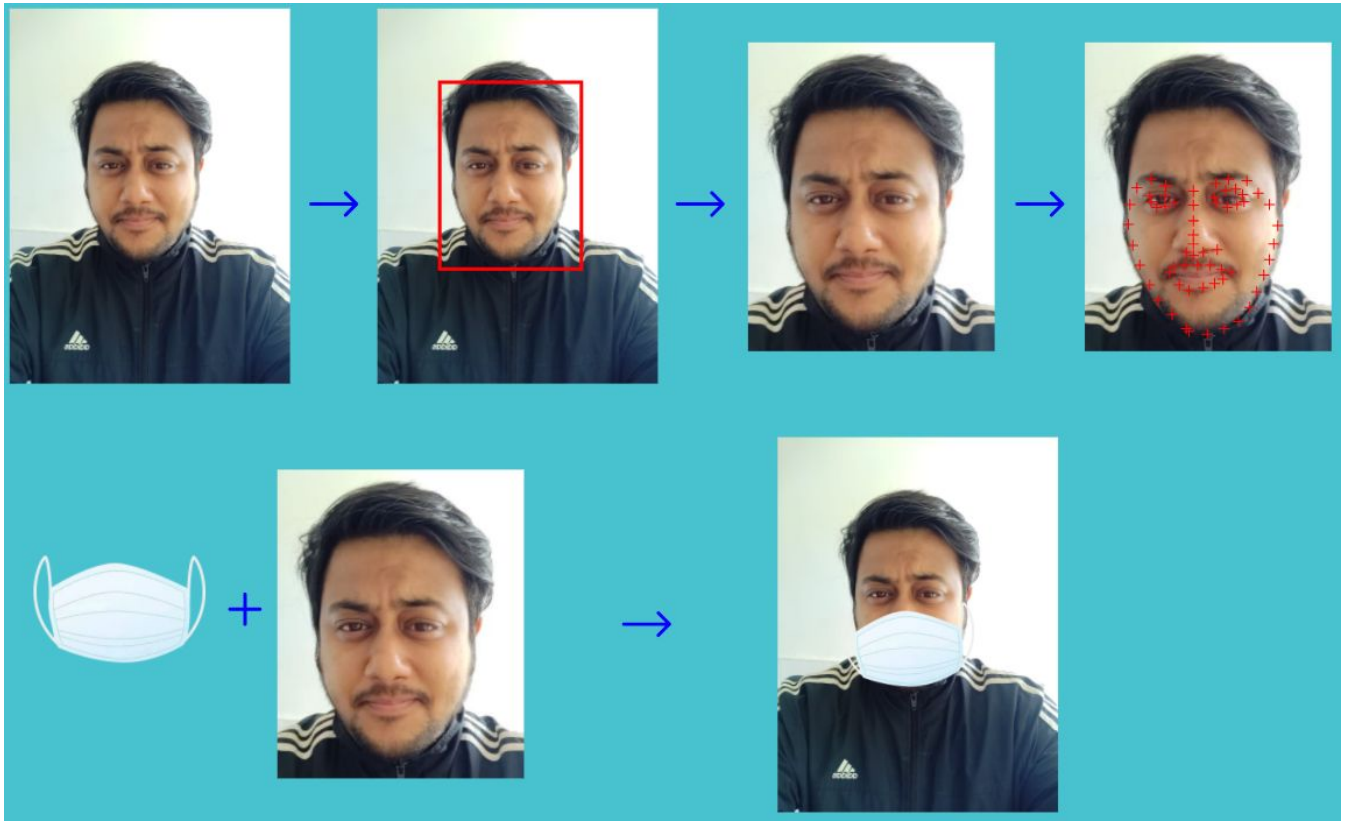
1. Taking normal images of faces
2. Creating a custom CV script to add face masks to them.

Usually we infer the location of facial structures such as: Eyes, nose, eyebrows, mouth, jawline, teeth, moustache etc.

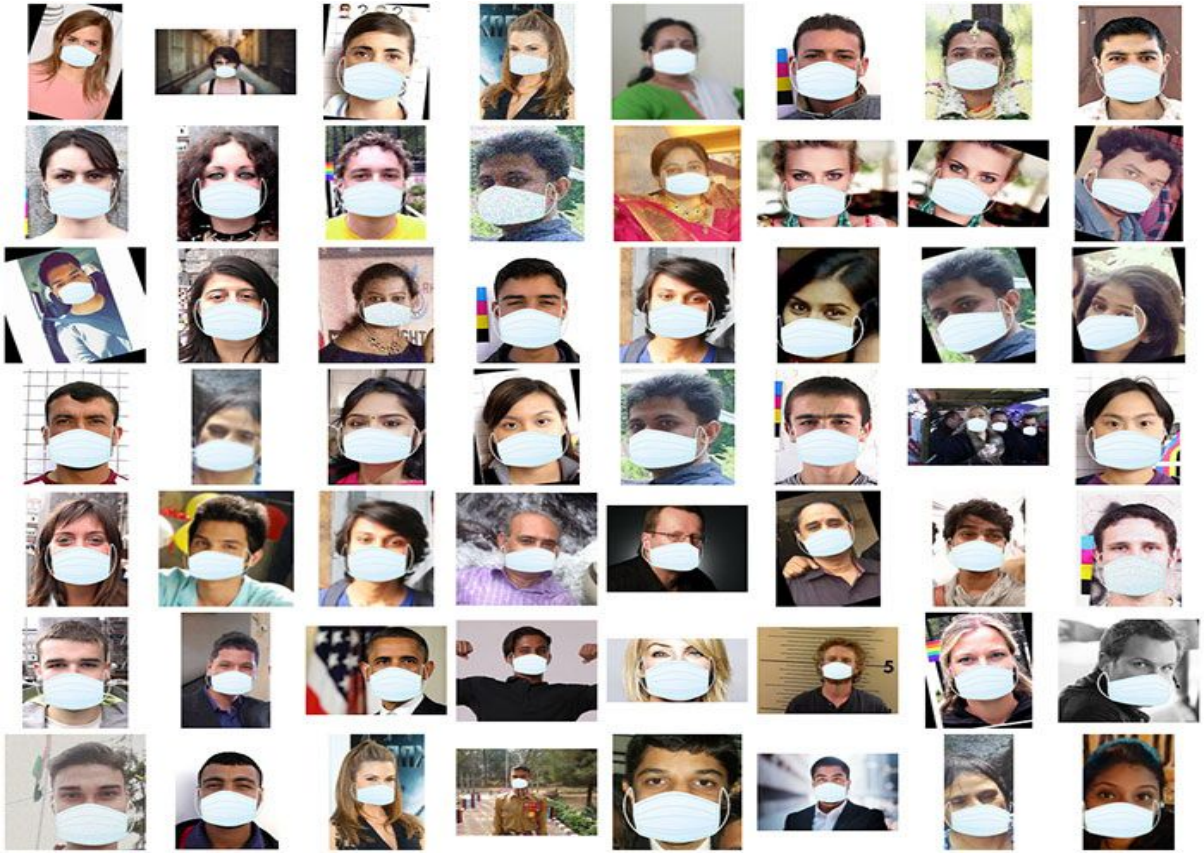
Steps:

1. Start with an image of person without mask
2. Apply face detection to compute the bounding box location of face.
3. Extract face Region of Interest (ROI)
4. Get image of a mask, and align it on top of the face properly.
5. Repeat the steps for multiple images

Illustration of the steps performed



Artificial Face Mask Dataset



Thanks!

Any questions?

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