**Face Recognition Using DeepFace**

**CMPE – 258 Deep Learning  
Swayam Swaroop Mishra  
ID - 013725595**

Read Me –

1. Files –
   1. dataset – (contains images for training)
      1. swayam – 6 images
      2. bill gates – 8 images
      3. steve jobs – 7 images
      4. unknown – 5 images
   2. image\_test – contains images of people for training.
   3. video\_test – contains images of people for testing.
   4. face\_detection\_model
      1. deploy.protxt
      2. res10\_300x300\_ssd\_iter\_140000.caffemodel
      3. shape\_predictor\_68\_face\_landmarks.dat
   5. output –
      1. dataset\_roi – extracted faces
         1. swayam – 6 images
         2. bill gates – 8 images
         3. steve jobs – 7 images
         4. unknown – 5 images
      2. embeddings.pickle
      3. le.pickle
      4. recognizer.pickle
   6. pyimagesearch
      1. \_\_init\_\_.py
      2. \_\_pycache\_\_
      3. centroidtracker.pyc
      4. \_\_init\_\_.pyc
      5. centroidtracker.py
   7. openface\_nn4.small2.v1.t7
   8. align.py
   9. faceTracker1.py
   10. faceTracker2.py
   11. deepFaceTrained1.py
   12. deepFaceTrained2.py
   13. deepFaceTrained2\_video.py
   14. deepFaceTrained2\_webcam.py
2. Requirements –
   1. Web Camera
   2. Python Version – 3.7.6
   3. Numpy
   4. OpenCv
   5. Pyimagesearch
   6. Argparse
   7. Imutils
   8. Pickle
   9. Scikit Learn
   10. dlib
3. Steps to run digit recognition –
   1. Download all the files into the same directory.
   2. In the terminal run the following scripts from top to down:
      1. If having more than two python version installed in your system (Mac Users) –
         1. Face Tracker 1 – Extract faces and align them – python3 faceTracker1.py
         2. Face Tracker 2 – Normalize the face and embed it to a pickle file – python3 faceTracker2.py
         3. Deep Face Trained 1 – Train the model – python3 deepFaceTrained1.py
         4. Deep Face Trained 2 –
            1. Test on Still Images – python3 deepFaceTrained2.py –i image\_test/image\_file\_name
            2. Test on Videos – python3 deepFaceTrained2\_video.py -v video\_test/video\_file\_name
            3. Test on Live Stream or Web Camer – python3 deepFaceTrained2\_webcam.py

References –

1. Harry Li OpenCV.
2. Martin Krasser Face Recognition.
3. Object Tracking - [Simple object tracking with OpenCV](https://www.pyimagesearch.com/2018/07/23/simple-object-tracking-with-opencv/)
4. Face Tracking - [OpenCV Face Recognition](https://www.pyimagesearch.com/2018/09/24/opencv-face-recognition/)