

## Face Recognition Using DeepFace

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**CMPE – 258 Deep Learning**  
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Read Me –

1. Files –
  - i. dataset – (contains images for training)
    - a. swayam – 6 images
    - b. bill gates – 8 images
    - c. steve jobs – 7 images
    - d. unknown – 5 images
  - ii. image\_test – contains images of people for training.
  - iii. video\_test – contains images of people for testing.
  - iv. face\_detection\_model
    - a. deploy.protxt
    - b. res10\_300x300\_ssd\_iter\_140000.caffemodel
    - c. shape\_predictor\_68\_face\_landmarks.dat
  - v. output –
    - a. dataset\_roi – extracted faces
      1. swayam – 6 images
      2. bill gates – 8 images
      3. steve jobs – 7 images
      4. unknown – 5 images
    - b. embeddings.pickle
    - c. le.pickle
    - d. recognizer.pickle
  - vi. pyimagesearch
    - a. \_\_init\_\_.py
    - b. \_\_pycache\_\_
    - c. centroidtracker.pyc
    - d. \_\_init\_\_.pyc
    - e. centroidtracker.py
  - vii. openface\_nn4.small2.v1.t7
  - viii. align.py
  - ix. faceTracker1.py
  - x. faceTracker2.py
  - xi. deepFaceTrained1.py
  - xii. deepFaceTrained2.py
  - xiii. deepFaceTrained2\_video.py
  - xiv. deepFaceTrained2\_webcam.py

2. Requirements –
  - i. Web Camera
  - ii. Python Version – 3.7.6
  - iii. Numpy
  - iv. OpenCv
  - v. Pyimagesearch
  - vi. Argparse
  - vii. Imutils
  - viii. Pickle
  - ix. Scikit Learn
  - x. dlib
3. Steps to run digit recognition –
  - i. Download all the files into the same directory.
  - ii. In the terminal run the following scripts from top to down:
    - a. 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](#)
4. Face Tracking - [OpenCV Face Recognition](#)