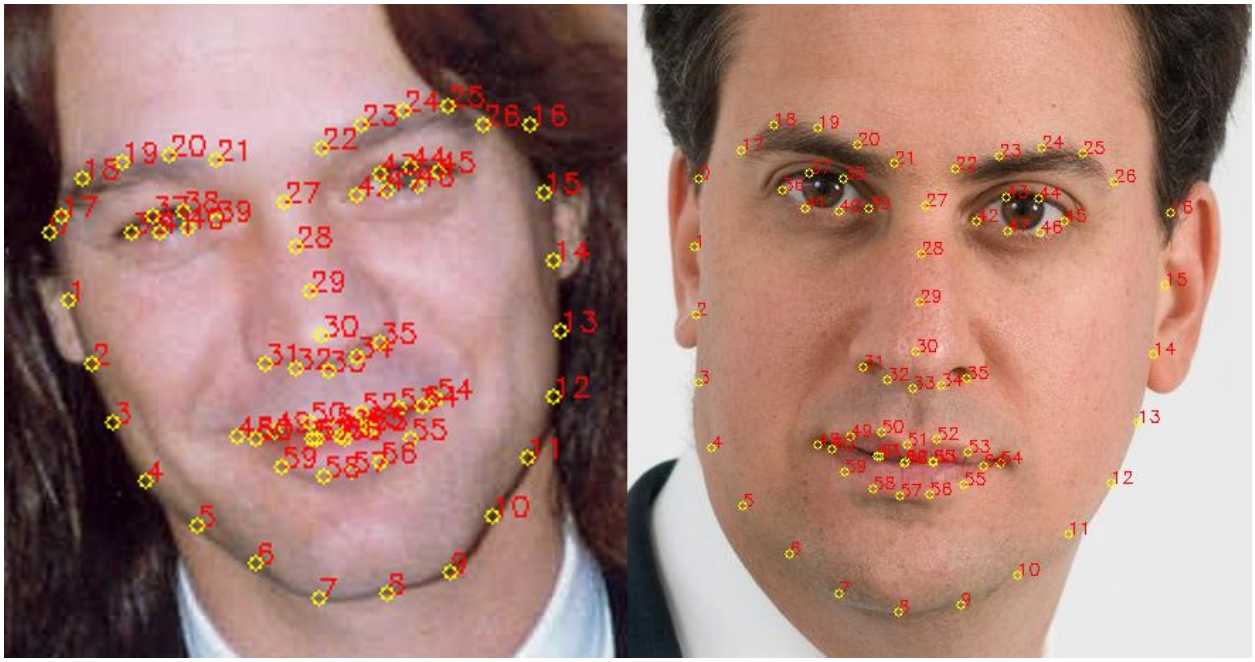
Algorithm :

1. First we extract the face boundary using dlib library if the image contains only one face.



https://matthewearl.github.io/2015/07/28/switching-eds-with-python/

2. We take point 27 as the center of face and calculate distances from it to points 0 to 16. So we get 17 distances as features of the image. We add two more features by calculating distance btw point 27 - 51 and 39 - 42. Total 19 features.

3. As images are of different shapes and size, the distance has to be normalized for comparison. So we divide the distances with the, distance btw the eyes (center to center). Tried other approaches like dividing my max all distances or distance btw points 1 and 15. But accuracy was higher in the applied method.

4. Now this 19 features for the X variable and label of the image as Y variable. Which is trained into svm classifier using rbf kernel with c=1000 using sklearn lib.

5. The same features are computed for test images and prediction is done with the trained classifier.