

Steps to run:

- 1) Input folder should contain subfolders class names which contains respective class images. Note that the images should contain single face only. Photoshopped effects may not detect the face properly. So a error will be raised for those cases with image name.
- 2) Install all lib used in the code, like sklearn, dlib, opencv2,pickel,etc
- 3) Run the python file data\_processing.py . It generates the output features and labels as pickel files.
- 4) Run the model\_train.py file for generating the model class.p
- 5) Accuracy of the model is estimated by taking 25% of input images of each class as test case.
  
- 6) **To predict the facecut of images , just save the images to be predicted into the folder test\_images. And then run the file model\_predict.py. The image name and the predicted facecut will be printed.**

**\*note : only to use the model as predictor , follow step 6 only.**

**The current model shows an accuracy of 41 %**

**For fewer manually picked images by me (less\_input folder) produces an accuracy of 66%. It even went upto 85 % with lesser number of classes.**

**If the classes are pure , the higher the accuracy the model will produce.**

**\*note**

- a) **Improvement can be done by having real scale of image. Or better normalization techniques.**
- b) **Merging confusion classes into one.**
- c) **Proper labelling the images. As svm is very noise sensitive.**