**Face recognition project notes**

* **potentially it can be used for a classroom. There are several considerations to make**

1. Due to the camera angle, some students’ faces may be obscured if the camera is positioned at the front of the classroom.
2. Scaling of faces especially for low resolution cameras (depends on camera placement).
3. Privacy concerns — especially since students/children are involved.

* **Sometimes images aren’t likely enough.**
* **Some tests**

1. It was working for small dataset.
2. when I increased number of people, it looked unstable sometimes.
3. face naming was too fluctuated, I mean, real name and another name was switched too frequently. sometimes it worked a bit stable, but sometimes looked very unstable  
   or gave wrong face-name.
4. I added more pictures to each person’s directory to increase accuracy.  
   After that, face naming seemed to get more stable, but there are still fluctuated output or wrong naming output frequent.  
   Is there any method to increase accuracy?

1. Once you start getting more and more people in your dataset this method will start to fail. Keep in mind that we’re leveraging a pre-trained network here to compute the 128-d facial embeddings. Try instead fine-tuning the network itself on the people you want to recognize to increase accuracy.

2. 2D facial landmarks in some cases can be used for face recognition but realistically they aren’t good for face recognition. The models covered in this post will give you better accuracy.

1. What should I do if the camera recognizes a person who is not being trained, does not appear as ‘unknown’, but appears in the name of another person?
2. By the way, linear SVM seems to perform bad with few dataset images per person. Using other classification algorithms such as Naive Bayes are better suited few datasets.
3. You can use whatever names in whatever languages you wish, provided Python and OpenCV can handle the character set.
4. highly recommend you use OpenCV 3.4.2.
5. how we could train a model to recognize rotated faces in different angles??? I want to make facial recognition through a eye fish camera

answer. You normally wouldn’t do that. You would detect the face and then perform face alignment before performing face recognition.

1. if I previously have many images trained using the SVM, and now I have several additional images (correspond to new people), I need to retrain the SVM by scanning through all 128-d vectors. It would take a lot of time when the number of images is kept increasing. Is there any tricks to improve this scalability issue? you would need to re-train the SVM from scratch. If you expect that more and more faces will be added I suggest you look at “online learning algorithms”.