Assignment 2 : Face Recognition

7 points

Due Date: 06.10.2020

1 Problem

You all are aware that face recognition is a method of identifying or verifying the identity of an individual using their face. A typical face recognition system involves face detection followed by classification. In this assignment, you will be implementing the classic Viola Jones Algorithm for detecting the face(s) in the image and then classify the detected faces using the idea of Eigen Faces.

2 Background

This piece of work by Viola-Jones was notable for a couple of reasons. One, it was the major use of Machine learning and Computer Vision. Two, was the very fast commercialization of this algorithm. This academic piece of research published in 2001, went on to be shipped into digital cameras. Undoubtedly, it's an interesting chance to explore and understand how well could you apply your theory to practice.

3 Dataset

For this assignment you are expected to show your results on any one of the datasets provided here. In case you have difficulty in choosing a dataset, you may work with Yale Face Database.

4 Deliverables

1. A well commented code-base written in Python. You can use Google Colab as well.
2. You can use the basic Python libraries like OpenCV, Numpy, Scipy, etc.
3. A short report describing your approach and few prominent results.
4. Kindly do not indulge in any malpractice and cite all the relevant references that you might have gone through while implementing the algorithm.