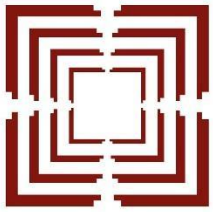

Ahmedabad
University

CSE523: Machine Learning

Faculty: Professor Mehul Raval

Group Name.: Code Rockers

Face Recognition & Attendance System

Harsh Rathod – AU1940196

Sushan Bhojak – AU1940200

Priya Bhoraniya – AU1940173

Dhruvanshu Parmar – AU1940166

PROGRESS REPORT:

Objective:

→ Face detection and face recognition are very important technologies these days.
→ The objective is to design an efficient Face recognition & attendance system.
→ We will create a system that can be implemented in schools, colleges, and offices for attendance and safety purposes.
→ The resulting detected face is then used to compare with the records on a created database to produce specific information like the student or employee's name, Roll num., etc.…

The programming language used: Python

Libraries used:

→ OpenCV with haar cascade frontal face algorithm.
→ We use OpenCV for image processing and performing computer vision tasks and haar cascade is a machine learning-based approach where a lot of positive and negative images are used to train the classifier.

KNN Algorithm in face detection:

→ We are using the Image Processing Technique in which captured images of any person and processed them through multiple algorithms to convert the alphanumerical conversation of images into text format and display.
→ The KNN algorithms assume that similar things exist in close proximity. To put it another way, similar things are near to each other.
→ Face classification is a stage for the process of matching testing data and

training data from face datasets. The k-nearest neighbors (KNN) are one of the simple algorithms that can be used for classification. Regardless of its simplicity, this method is quite effective as a classification.

Things we have done:

- We found some datasets that may be useful in our project.
- The programming language used: Python

Outcomes of the task performed:

- Getting our systems configured and finishing off the flow chart of the approach used for the project.

Dataset links:

1. http://mmlab.ie.cuhk.edu.hk/projects/CelebA.html

Research Paper link:

1. Dr. V Suresh“Facial Recognition Attendance System Using Python and OpenCV" Quest Journals Journal Of Software Engineering And Simulation, Vol. 05, No. 02, 2019, Pp. 18-29. https://www.questjournals.org/jses/papers/Vol5-issue-2/D05021829.pdf
2. https://analyticsindiamag.com/a-complete-guide-on-building-a-face-attendance-system/

The task to be performed next week:

- More advancement in implementation.