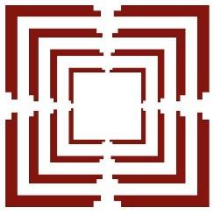

Ahmedabad University

CSE523: Machine Learning

Faculty: Professor Mehul Raval

Group Name.: Code Rockers

Face Recognition & Attendance System

(Report File)

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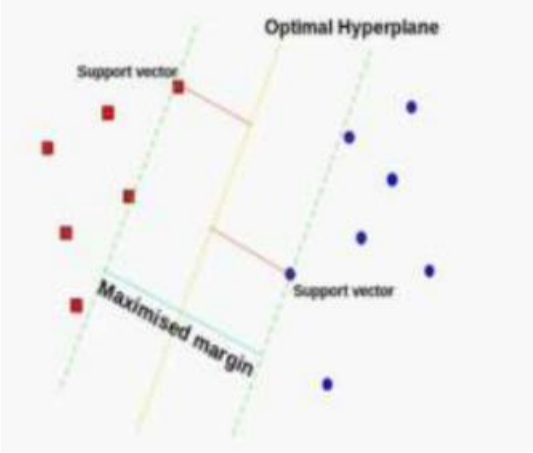
1. Task performed in the week:

- Clear the dataset
- The implementation of The Viola-Jones algorithm is available on software like OpenCV and Web Browsers (using adobe flash).
- The existing implementation of the Hidden Markov Model with SVD for face recognition are available on C++ and OpenCV libraries.

- SVM is one of the most robust and accurate Machine learning
- algorithm among other classification algorithms. A small
- change to the data does not greatly affect the Hyperplane and
- hence SVM. So, the SVM model is stable.
-



SVM Diagram

- Here,
- Hyperplane: Hyperplane are the boundaries that help to classify the data points into two classes.
- Support vectors: Support Vectors are the data points that are closest to the Hyperplane and control the position and direction of the Hyperplane.
- Margin: Distance between the Hyperplanes is called margin.

Here are the suitable libraries which will be required:

```
import cv2
import numpy as np
import face_recognition
import os
from datetime import datetime
```

The task to be performed next week:

- More advancement in implementation.