THE SMART ATTENDENCE MONITORING - SYSTEM

Engineer to Excel

Name & Reg.No:

Poster No.1105XXX

Guide & Dept. :

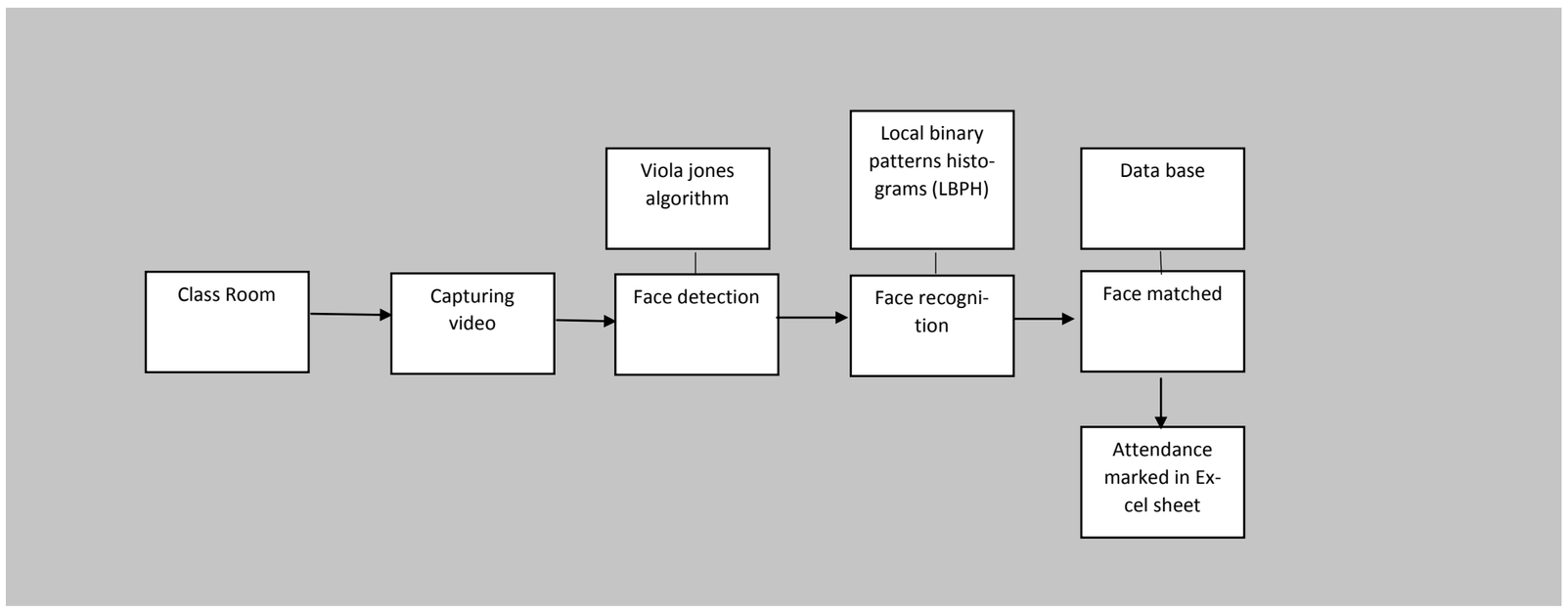
AIM

To detect and recognize the faces

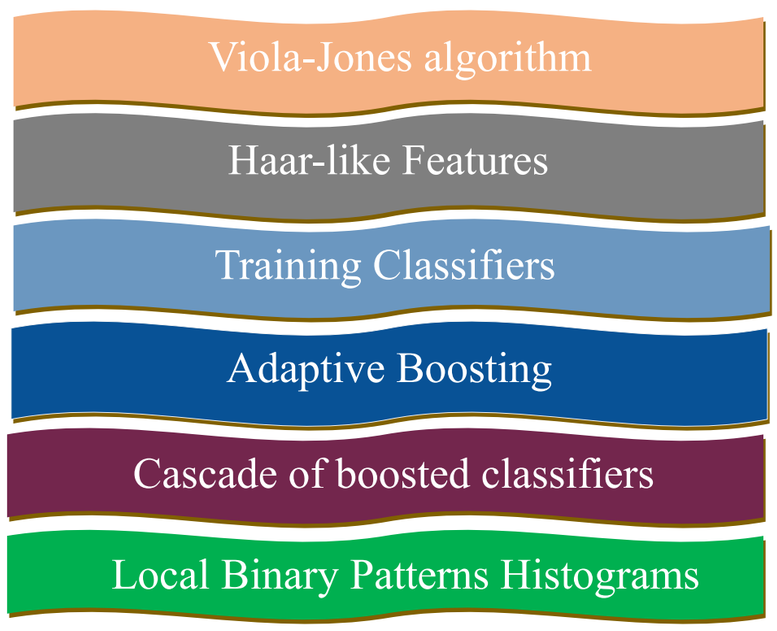
BACKGROUND

As an important part of class teaching, attendance plays an important role in the evaluation of teaching. At the beginning and end of class, it is usually checked by the teacher, but it may appear that miss someone or some students answer multiple times. To overcome this issue, the latest technology is used to detect the faces and recognize the faces using python programming. Face Detection is one of the hottest topics of computer vision in machine learning application. This technology has been available for some years now and is being used all over the world. In this paper, capturing the images of students from the database and faces are detected by the algorithm and then it is recognized with the database and finally, the attendance is marked. For detecting faces Viola-Jones face detection algorithm is used and for recognizing the faces from the databases Local Binary Patterns Histograms (LBPH) technique is used.

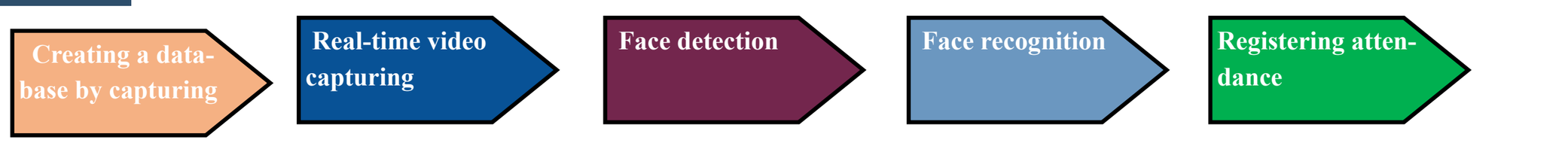
MATERIALS AND METHODS-



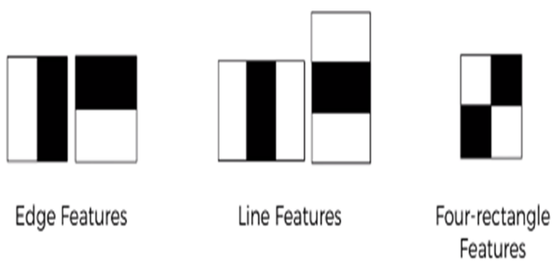
ALGORITHM FLOW CHART



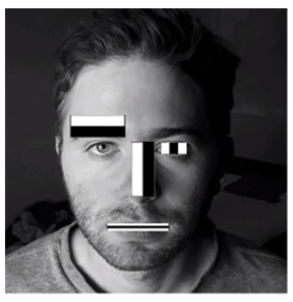
RSULTS AND DISCUSSION



Working of Viola-Jones algorithm

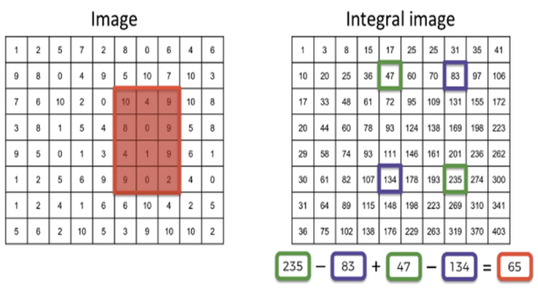


Haar like features

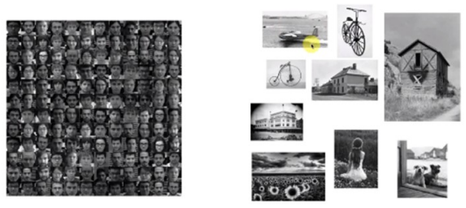


Applying Haar like features to the image

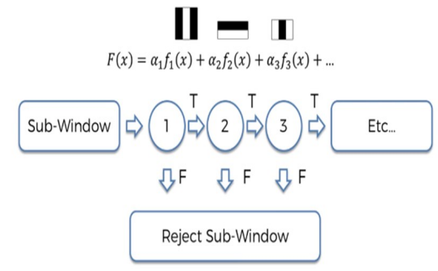
Converting features into pixel intensity



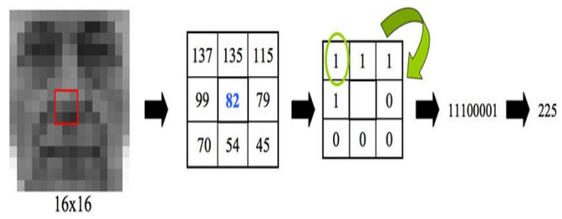
Integral image



Training Facial and non facial images



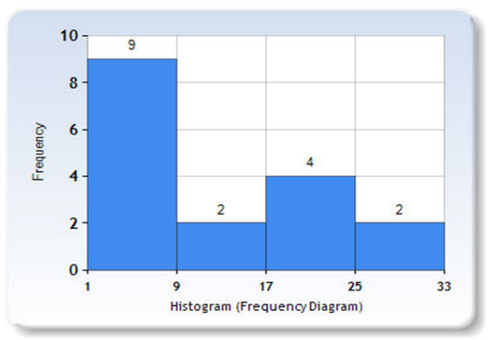
Cascade of boosted classifier



LBPH Face Recognizer Process

CONCLUSION

This project on Face detection and face detection had given us an opportunity to study various methods used in the field of face recognition. In this project, Local Binary Patterns Histograms (LBPH) based face recognition system is for feature extraction and recognizer. The observation says Local Binary Patterns Histograms (LBPH) perform well under the suitable conditions like Normal light condition, no pose variation, distance from the camera should be 1-3 feet for best results. Since both work on the pixel to pixel. Calculation, higher resolution is required to get the best results.



Histogram image

OUTPUT