

AUTOMATIC ATTENDANCE MARKER

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Abstract

This project is about automatic attendance management. The automatic attendance management will replace the manual method, which takes a lot of time consuming and difficult to maintain. In this project we used image recognition method to mark the attendance . In this the teacher will open the camera from a position and capture the live vedio of whole class . he faces are detected and then it is recognized with the database and finally the attendance is marked. There are various methods for comparing the faces . OpenCV library is used in this project.

INTRODUCTION

Attendance maintenance is a significant function in all the institutions to monitor the performance of the students. Every institute does this in its own way. Some of these institutes use the old paper or file based systems and some have adopted strategies of automatic attendance using some biometric techniques. A facial recognition system is a computerized biometric software which is suited for determining or validating a person by performing comparison on patterns based on their facial appearances.

OBJECTIVE

The main objective of creating this model is to mark the attendance automatically which reduce the time consumption and difficulty in maintenance. This model can be reliable system to mark attendance without any proxy.

METHODOLOGY

This methodology includes image processing which contains face detection, feature extraction, face recognition. Some algorithm is used for face comparison like Eigen faces , Fisher faces and Local binary patterns histograms(LBPH) . LBPH uses the following parameters radius ,grid-x, grid-y and neighbours. Opencv and pandas libraries are used in this project.

RESULTS

The interface for the Smart Attendance System has been created. Using the interface the images of the individual students is being recorded and stored in the training dataset. Simultaneously their information is stored in the database i.e. excel sheet. Finally the images of the students is being tracked and recognized.

FLOWCHART

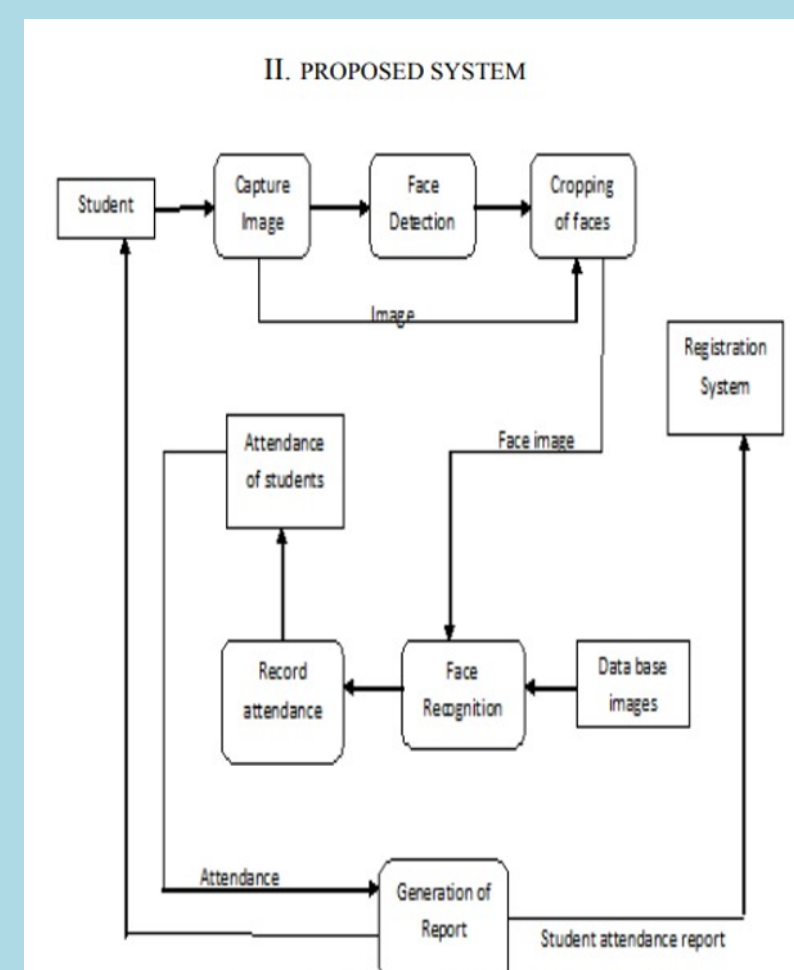


Figure.1 Block Diagram of Proposed System

ANALYSIS AND IMAGE RECOGNITION



CONCLUSION

This paper features the most productive Open CV face recognition method accessible for Attendance Management. The system has been implemented using the LBPH algorithm. LBPH excels other algorithms by confidence factor of 2-5 and has least noise interference. The implementation of the Smart Attendance System portrays the existence of an agreement between the appropriate recognition rate and the threshold value. Therefore LBPH is the most authentic and competent face recognition algorithm found in Open CV for the identification of the students in an educational institute and marking their attendance adequately by averting proxies.