A

Major Project

On

A DIGITALIZED ATTENDANCE SYSTEM USING FACIAL RECOGNITION

(Submitted in partial fulfillment of the requirements for the award of Degree)

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING

BY

C. Rohit Kumar (177R1A0571)

U. Vamshi Krishna (177R1A0572)

J. Ravi (177R1A0581)

Under the Guidance of

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

(Accredited by NAAC, NBA, Permanently Affiliated to JNTUH, Approved by AICTE, New Delhi)

Recognized Under Section 2(f) & 12(B) of the UGC Act.1956,

Kandlakoya (V), Medchal Road, Hyderabad-501401.

2017-2021

ABSTRACT

Every organization requires a robust and stable system to record the attendance of their students and every organization have their own method to do so, some are taking attendance manually with a sheet of paper by calling their names during lecture hours and some have adopted biometrics system such as fingerprint, RFID card reader, Iris system to mark the attendance. The conventional method of calling the names of students manually is time consuming event. Use of face recognition for the purpose of attendance marking is the smart way of attendance management system. Face recognition is more accurate and faster technique among other techniques and reduces chance of proxy attendance. Though there are many existing facial recognition systems there are many drawbacks related to them like incorrect recognition for similar people. The advantage of this proposed system is it provides an easy environment for both student and faculty by providing android interface for the students to check their status and percentage and also for faculty to monitor the performance of the student as it provides a common cloud storage for both. The database is also used to extract the whole class details to the respective class Co-Ordinator to ease the work of monitoring the class. This way our desired system will eliminate the problems faced by lecturers.

EXISTING SYSTEM

Attendance in any organization is marked using conventional pen and paper method. The faculty should call each and every student in order to mark attendance. There is no central database for attendance and faculty needs to maintain a file regarding the attendance.

DISADVANTAGES:

1. Redundancy of data is more.
2. More human power is required in order to mark attendance.
3. Time consuming.
4. Possibility of human errors.
5. No security is provided.

PROPOSED SYSTEM

In this project example, we will build a Facial Recognition algorithm and the novelty of our proposed system is that it is capable of recognizing the faces of the students even in adverse light conditions. After recognition the attendance is marked in Cloud Database. An android application developed for students helps them to continuously check their attendance status and also know about various attendance related details. An android application developed for faculty will help faculty to track the details of each and every student of his class. It will automate the whole attendance process and thereby reducing the overhead imposed on faculty. Advance facial recognition helps us to ease the job of attendance marking.

ADVANTAGES:

1. Data Security is achieved.
2. Automated attendance process.
3. Eliminating proxy attendance.
4. Centralized system to mark and review attendance.
5. File system is eliminated.

HARDWARE REQUIREMENTS

For developing the application, the following are the Hardware Requirements:

1. Processor: Intel i5
2. RAM: 8GB or higher
3. Space on Hard Disk: Minimum 40 GB

SOFTWARE REQUIREMENTS

Operating System supported:

1. Windows 10
2. Windows 8

Languages:

Python, Java, XML

Library:

OpenCV,CMake, Dlib, Facial Recognition, Numpy, Pandas

CONCLUSION

From this concept, I conclude that this model will help many organizations to automate the process of attendance and help in maintaining a centralized system for both faculty and students. Introduction of facial recognition also helps in overcoming the problems that are caused due to traditional attendance system. It also helps us in following COVID norms.