**INDIRA COLLEGE OF COMMERCE AND SCIENCE PUNE.**

**Synopsis of Project**

**On**

**Student Attendance System**

**Project by,**

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**1.ABSTRACT**

The class teacher needs to take students’ daily attendance for every school day and analyze attendance data. It is a hassle for the teacher to make the analysis of attendance data manually and ensure no error-prone in that process. This study proposes to develop a Python-based application, Attendance Management System (AMS) to solve this problem. This system includes functions for the class teacher to record student attendance. But firstly, we have to provide sample pictures to the system to train the classifier which will detect the faces of the students, display their details on the screen, mark their attendance accordingly, and save it to the database.

**2.Objective**

Accelerated technological advancements experienced in the 21st century have enabled automation of services delivered to the people across the globe. My motivation to develop this system came from the increased need to access resources over the internet for purposes of research, increased information technological advancements that enables service automation, and the governments drive to digitize resources for extensive research in both public and private universities. The vast knowledge and skills acquired during the past two years of my study at ICCS also motivated me to develop a system that provides a solution to a problem.

**3.1Existing System**

In the available Student Attendance Management System, the teachers have to maintain the details of each and every student on the registers which makes the process slow. While they need to spend an extra hour to maintain the records of students. To search a particular student attendance details for a particular period of time or day is difficult. The teachers have to search entire register to find.

**3.2Proposed System**

This proposed system has a number of features:

• To develop a system that ensures the privacy of its users and enable them access it remotely.

• To enable easy maintenance of the details.

• To enable easy retrieval of information by simply searching the system.

• To design a system that responds in a timely manner.

• To enable easy borrowing of information.

• To enable automated presenty calculation and reports generation.

• To enable a secure and portable database system that eliminates duplicate data.

• To ensure a paperless environment.

**4.Modules of Project**

Current project contains various modules, such as: -

* **Face recognition module** – this module recognizes the faces of students, display their details on the screen and mark the attendance of students automatically.
* **Students Details** – Here in, we can manually add, delete, update student details to the database.
* **Attendance Module** – Here in, the system displayed the student attendance records which is stored automatically by the system with the help of previous modules.
* **Train Data Module** – This is a machine learning module. Here in, we train a classifier to detect student face by providing sample pictures.

**5.Requirement Analysis**

**Hardware Specification**

RAM: At least 1GB

Hard Disk: At least 80 GB

Monitor: 17-inch Color Monitor.

Processor: 3.0 GHz Processor

Peripheral’s: Mouse and Keyboard

**Software Specification**

Operating System: Window 7, 8,10

Language: MySQL workbench

Server: MySQL server

Browser:

**6.Future Enhancement**

1. **Attendance Tracking in Real-Time**

* A student attendance management system helps to track and store the attendance data in real-time. Besides student and staff attendance, the system also helps school admins in maintaining and tracking leaves applications, arrival & departure times, lunch breaks, and vacations of staff members & students.

1. **Absence of Proxy Attendance**

* In many schools, especially the higher grades, students manipulate the daily attendance with proxies, buddy punching or tampering of records in a matter of concern. Using a biometric/RFID system with an attendance module makes it virtually impossible to fake attendance, as each individual’s biometric information is unique. This ensures that the attendance is accurate with no opportunity for student manipulation. It also improves the punctuality and the discipline of the students.

1. **Instant notification to parents**

* The integration of the student attendance management system allows schools to track attendance and absenteeism using biometric data. This data is in real-time and the software can send automated emails and messages to the parents to notify them immediately if their child fails to make it to class.

1. **Improved school security**

* Using a student attendance management system with biometric software ensures that only students and employees with valid biometric credentials can access the school. Moreover, the institution can alert the parents about visitors during school hours and keep track of them.

**7.Reference**

1. **Book**

* Programming Python :- Mark Lutz, 2014
* Python is a Nutshell :- Alex Martelli, 2003
* Python Standard Library by Example, Doug Hellmann, 2011

1. **Reference Link**

* <https://docs.python.org/3/reference/>
* <https://www.w3schools.com/python/python_reference.asp>
* <https://python-reference.readthedocs.io/en/latest/>