**ABSTRACT**

The management of the attendance can be a great burden on the teachers if it is done by hand. To resolve this problem, a smart and auto attendance management system is being utilized. But authentication is an important issue in this system. The smart attendance system is generally executed with the help of biometrics. Face recognition is one of the biometric methods to improve this system. Being a prime feature of biometric verification, facial recognition is being used enormously in several such applications, like video monitoring and CCTV footage system, an interaction between computer & humans and access systems presents indoors and network security. By utilizing this framework, the problem of proxies and students being marked present even though they are not physically present can easily be solved. The main implementation steps used in this type of system are face detection and recognizing the detected face.

Automatic face recognition (AFR) technologies have made many improvements in the changing world. Smart Attendance using Real-Time Face Recognition is a real-world solution which comes with day-to-day activities of handling student attendance system.

Face recognition-based attendance system is a process of recognizing the students face for taking attendance by using face biometrics based on high - definition monitor video and other information technology.

It helps in conversion of the frames of the video into images so that the face of the student can be easily recognized for their attendance so that the attendance database can be easily reflected automatically.

This paper proposes a model for implementing an automated attendance management system for students of a class by making use of face recognition technique, by using Eigenface values, Principal Component Analysis (PCA) and Local Binary Patterns Histograms (LBPH) algorithm. After these, the connection of recognized faces ought to be conceivable by comparing with the database containing student's faces. This model will be a successful technique to manage the attendance and records of students.

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**LIST OF ABBREVIATIONS**

|  |  |
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| **Abbreviation** | **Definition** |
| CNN | Convolutional Neural Networks |
| CV | Computer Vision |
| EAR | Eye Aspect Ratio |
| LBPH | Local Binary Pattern Histograms |
| HCC A | Haar Cascade Classifier |
| GUI | Graphical User Interface |
| RFID | Radio Frequency Identification |
| XAMPP | X-Operating System, Apache, MySQL, Php, Perl |