

ABSTRACT

This project presents an automated, face-recognition-based attendance management system designed to streamline attendance tracking in educational and professional environments. The system leverages facial recognition technology, utilizing the facenet-pytorch library, to accurately identify students or employees by capturing and verifying their faces in real-time. Upon recognition, the system cross-references with a predefined timetable, ensuring attendance is marked automatically only for the relevant class and time, eliminating the need for manual attendance entry.

The system includes a web interface with two roles: students access a page for attendance recognition, while teachers access a secure login page to manage various functionalities. Teachers can register new students, train the recognition model with updated images, edit student and attendance records, and modify the timetable. Additionally, the system integrates an automated email feature using yagmail, which generates and sends attendance reports periodically to specified recipients, providing a seamless reporting process.

The project is designed to enhance efficiency by reducing manual effort and minimizing errors in attendance management. By integrating facial recognition with automated reporting, it offers a modern, secure, and scalable solution suitable for dynamic environments where accurate tracking and management of attendance are essential.