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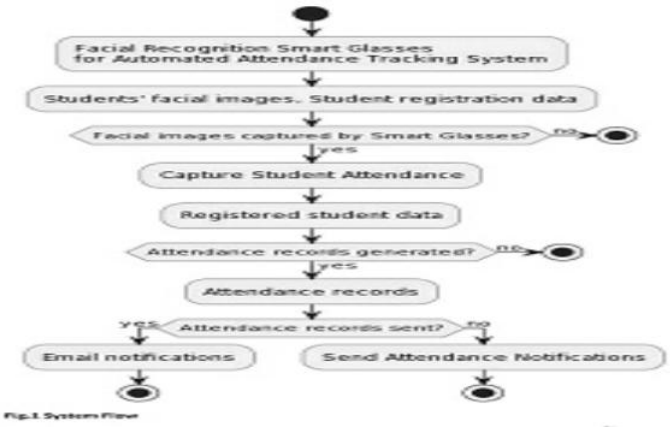
(57) Abstract :
This invention presents an innovative approach to attendance tracking in educational settings, where teachers wear smart glasses during lectures. Leveraging cutting-edge machine learning, analytics, and AI techniques, our system captures photos automatically as the teacher moves around the classroom. These photos are temporarily uploaded to a database containing student photos. Through sophisticated comparison algorithms, the system determines student attendance by matching uploaded photos with those in the database. Attendance status, whether present or absent, is promptly communicated via email and mobile notifications to registered recipients. Additionally, the system autonomously generates weekly, monthly, and semester-wise attendance reports, providing comprehensive insights into student attendance patterns. To optimize resource usage, captured photos are automatically removed after a predefined period, enhancing processing speed and conserving memory space. Strict access controls, enforced through user authentication via a finger-operated button, ensure that only authorized personnel can operate the smart glasses. Our project addresses several critical challenges in traditional attendance systems, including time inefficiencies, memory constraints, and network connectivity issues. By seamlessly integrating machine learning and AI technologies, we revolutionize attendance tracking, enhancing accuracy and security while mitigating the impact of network disruptions. Incorporating offline functionality further enhances system reliability, allowing data capture even in the absence of internet connectivity. Ultimately, our solution represents a significant advancement in attendance management, offering a streamlined, efficient, and technologically sophisticated alternative to conventional methods.

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