

IoT-Based Face Detection for Automated Attendance Marking with Lecture Timing Integration

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Abstract: Attendance tracking in educational institutions is a crucial process that ensures student participation and engagement. Traditional attendance systems, such as manual roll calls and RFID-based methods, often suffer from inefficiencies, inaccuracies, and the possibility of proxy attendance. This paper presents an IoT-based face detection system for automated attendance marking, integrating lecture start and end times to provide an accurate, real-time attendance solution. By leveraging artificial intelligence (AI), machine learning (ML), and IoT devices, this system captures and verifies student identities, ensuring a secure and efficient attendance process. Experimental results demonstrate the effectiveness of the proposed model in different lighting conditions and classroom environments, showcasing its potential for widespread implementation.

Keywords: Attendance tracking