ScanAttend: A Facial Recognition Attendance Marking System

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Abstract: *Attendance management is a vital aspect of educational and organizational efficiency. ScanAttend, a novel system, employs facial recognition technology supported by Python packages like face-recognition, OpenCV, NumPy, and Pandas to revolutionize attendance tracking. This research explores ScanAttend's development, methodology, and ethical implications. The system's efficiency, accuracy, and security are scrutinized, alongside the crucial role of Convolutional Neural Networks (CNNs) in facial detection and recognition. In doing so, ScanAttend emerges as a promising solution with the potential to transform attendance management, albeit with ethical considerations.*

In the pursuit of more efficient and reliable attendance tracking, ScanAttend represents a significant leap forward. By leveraging cutting- edge technology, it offers the potential to streamline attendance management. However, the research emphasizes the importance of addressing ethical considerations in the use of facial recognition for such purposes. This paper, through a comprehensive analysis, seeks to contribute to the ongoing dialogue on attendance tracking and technological advancements, ultimately promoting responsible and ethical deployment of this innovative solution

Keywords: Facial recognition, attendance management, Python packages, OpenCV, NumPy, Pandas, CNNs, ethical considerations.

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