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AN ADVANCED FACE RECOGNITION ATTENDANCE SYSTEM USING RASPBERRY

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ABSTRACT

This paper demonstrates the implementation of face identification and recognition techniques in image processing to develop a system for detecting and recognizing frontal faces. Currently, enterprises and institutions are adopting face detection methods such as Radio Frequency Identification (RFID), person identification, and identification of fingerprints to attend various conferences. Out of all these recognition systems, recognition of face stands out as the most efficient method, despite its challenging implementation. It involves continuous observation and constant improvement. This paper presents the implementation of a face recognition system for a classroom attendance system. The objective of this implementation is to enhance the system's capacity to prevent duplicate inputs, maintain uninterrupted operation, and consistently document attendance by utilizing Raspberry Pi 4 and OpenCVA modular system interfaced with Raspberry Pi comprises the following components: Face Recognition, Face Detection, Face Preprocessing, and Face Training. This system allows reliable and adaptive attendance monitoring in academic institution. Prioritizing usability lets administrators and educators use the technology beyond its basic functions. Its ease of use makes it suitable for modernizing school attendance monitoring.

KEYWORDS: *Raspberry Pi 4, OpenCV, Facial Attendance System.*

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