IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 5, June 2023

An IoT Based Attendance System using PI Cam and RFID Controller

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Abstract: *The primary focus of our country's education system is on attendance, particularly during graduation and post-graduation, as it is considered indicative of a student's commitment to their education. This project specifically centers around improving the attendance system. In the past, attendance used to be recorded in a traditional manner. However, over time, various attendance systems have been introduced, many of which rely on a single authentication method using a single sensor. Currently, there are attendance systems that utilize two sensors, like the "attendance system using biometric and RFID controller," for capturing attendance. Nevertheless, a drawback of the current system is the potential problem faced by management if one of the sensors fails to record data, making it difficult to obtain accurate attendance records. Moreover, injuries to the hand can hinder the use of the biometric attendance system results in a reliance on conventional techniques. An ESP32 camera is used in our project to take pictures of students or staff. for attendance purposes. This camera is capable of capturing facial images as well, ensuring attendance can still be recorded even in cases of facial injuries. Alternatively, an RFID card can be used as a backup method for attendance. The materials required for this project include Node MCU or ESP32, ESP32 camera, and an RFID controller.*

Keywords: Attendance system using biometric and RFID

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