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Automated Attendance Marker

Abhishek Gupta, Ashutosh Anand, Naveen Kumar Giri, Arathy Rajeev
Raj Kumar Goel Institute of Technology, Ghaziabad, India

Abstract: *The traditional manual attendance taking process is prone to errors and time-consuming, leading to the need for an automated attendance marker. This paper presents the implementation of an automated attendance marker using Python and Local Binary Patterns Histograms (LBPH) algorithm in combination with cascade. The system uses facial recognition technology to mark attendance, which saves time and reduces the risk of errors associated with manual attendance taking processes.*

The LBPH algorithm creates a histogram of local binary patterns of the facial image, which is then compared to a pre-existing dataset using cascade. The cascade classifier is a machine learning algorithm that is used to detect objects in images. The system was tested on a dataset of facial images of students and employees, and it was found to work consistently well in different lighting conditions and with varying facial expressions.

The implementation of the system was done using the OpenCV library, a powerful computer vision library for Python. The OpenCV library was used to capture the facial image from the camera, train the LBPH algorithm on the facial dataset, and use cascade to detect faces in the images.

Fig-1.1

The results of the implementation demonstrate that the automated attendance marker using Python and LBPH algorithm in combination with cascade is an efficient and accurate method for marking attendance in educational institutions and organizations. The system is also flexible and can be customized to suit the needs of different organizations. Overall, this system can streamline the attendance taking process and reduce the workload of the institution's staff while also ensuring greater accuracy and reliability

Keywords: attendance marker

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