**Face Recognition based Attendance System using Haar Cascade and Local Binary Pattern Histogram Algorithm**

**Abstract:**

The attendance system is used to track and monitor whether a student attends a class. There are different types of attendance systems like Biometric-based, Radiofrequency card-based, face recognition based and old paper-based attendance system. Out of them all, a Face recognition based attendance system is more secure and time-saving. There are several research papers focusing on only the recognition rate of students. This research focusing on a face recognition based attendance system with getting a less false-positive rate using a threshold to confidence i.e. euclidean distance value while detecting unknown persons and save their images. Compare to other euclidean distance-based algorithms like Eigenfaces and Fisherfaces, Local Binary Pattern Histogram (LBPH) algorithm is better [11]. We used Haar cascade for face detection because of their robustness and LBPH algorithm for face recognition. It is robust against monotonic grayscale transformations. Scenarios such as face recognition rate, false-positive rate for that and false-positive rate with and without using a threshold in detecting unknown persons are considered to evaluate our system. We got face recognition rate of students is 77% and its false-positive rate is 28%. This system is recognizing students even when students are wearing glasses or grown a beard. Face Recognition of unknown persons is nearly 60% for both with and without applying threshold value. Its false-positive rate is 14% and 30% with and without applying threshold respectively.