

# Biometric : Facial Recognition

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**Abstract:** *In the digital age, facial recognition systems play an important role in almost every field. Facial recognition is one of the most commonly used biometric authentication methods. It can be used for security, authentication, identification, and many other benefits. Although less accurate than iris and fingerprint recognition, it is widely used because it is a non-contact and non-invasive process. In addition, facial recognition systems can also be used for attendance management in schools, colleges, offices, etc. This system aims to build a classroom attendance system using the concept of facial recognition, as existing manual attendance systems are time and maintenance cumbersome. A representative may also be present. Therefore, the need for this system is increasing. This system consists of four phases: database creation, face recognition, face recognition, and presence update. The database is created using photos taken by students during class. Face detection and recognition are performed using the Haar cascade classifier and local binary pattern histogram algorithms, respectively. Faces are detected and recognized based on live streaming video of the classroom. A list of attendees will be mailed to each faculty member after the meeting*

**Keywords:** Face Recognition; Face Detection; Haar-Cascade classifier; Local Binary Pattern Histogram; attendance system

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