ABSTRACT

Attendance for the students is an important task in class. When done manually it generally wastes a lot of productive time of the class. As it the repetitive, Student authentication can be automated using various methods available in the market like biometric attendance. This proposed solution for the current problem is through automation of attendance system using face recognition. Face is the primary identification for any human. This project describes the method of detecting and recognizing the face in real-time. Raspberry Pi 0W is used for computation in the detection and recognition modules. This project describes an efficient algorithm using open source image processing framework known as OpenCV. This system is build by five modules – Face Detection, Face Pre-processing, Face Training, Face Recognition and Attendance Database. The face database is collected to recognize the faces of the students. The system is initially trained with the students faces which is collectively known as student database. The system uses user friendly User interface to maximize the user experience while both training and testing which are collecting student images and taking attendance with the system. This project can be used for many other applications where face recognition can be used for authentication. Raspberry Pi usage helps in minimizing the cost of the product and the usability as it can be connected to any device to take the attendance. The system will automatically update the student's presence in the class to the student's database.