NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH
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DEPARTMENT OF ELECTRICAL ENGINEERING

II B. Tech. End Semester
Evaluation
Mini-Project
Poster Presentation

AUTOMATIC ATTENDANCE SYSTEM USING FACE DETECTION AND RECOGNITION

ABSTRACT

Automation is a growing technology in today's changing world. Robotization is utilizing control systems and information technologies to reduce the need for human work in producing goods and services. In this project, we describe the design and development of a new automated system using a person's facial expression. The system uses a Histogram of an Oriented Gradient algorithm to detect the human faces locally saved on the computer. This method uses dlib, openCV2, and face-recognition Python libraries.

INTRODUCTION

In order to determine class attendance, face detection and recognition are performed. Face detection is used to determine the location of the faces of the students. Then, in face recognition, the face images detected will be compared with the data base consisting of images of students in the class, and attendance will be recorded accordingly

OBJECTIVE

1. To avoid wastage of time
2. To avoid fake attendance

Keywords

1. Python – OpenCv, dlib, face_recognition
2. Eigen faces
3. Vial Jones Algorithm

PROPOSED METHODOLOGY

1: Face recognition
Identification of all faces Face detection is done by using a tool known as Histogram of Oriented Gradients, or simply HOG . We're going to begin by rendering our picture black and white to discover faces in a picture.

2:Posing & Encoding Faces
Focus on each face & acknowledge that it is still the same person even when a face is positioned in an odd or in a poor light. We will attempt to twist each picture with the goal that the lips and eyes in the image are as yet in the example position. In the next steps, this will make it much more clear for us to think about faces. We will utilize an algorithm called facial landmark estimation to do this. We might calculate, for example, the length of the nose the distance between the eyes, the size of each ear, etc.

3:Attendance system:
We will discover the individual who has the nearest estimation to our test picture in our data set of known people. We will utilize a direct SVM classifier. It takes milliseconds to execute this classifier. The classifier's result is the person's name. We will save all the student images using their roll numbers. For example," 1.jpg, 2.jpg,". We will mark attendance in the excel sheets.

FLOWCHART
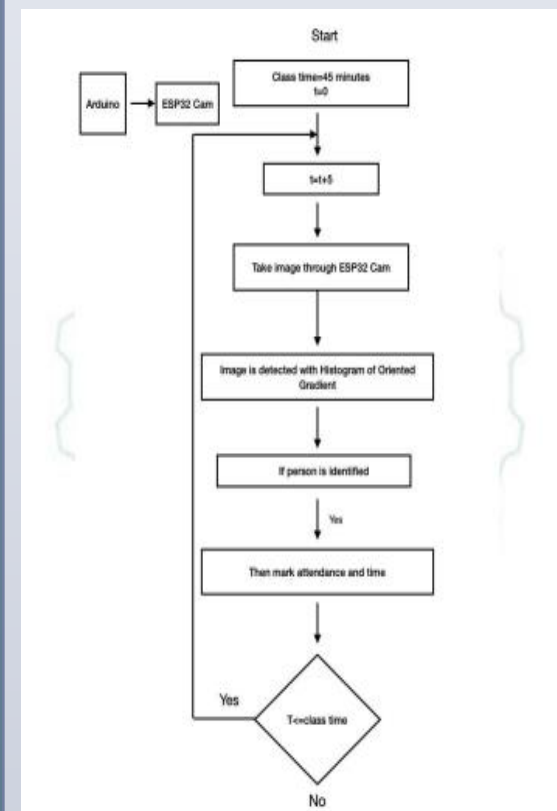
RESULT

CONCLUSION

Automatic attendance has many advantages, most of the existing systems are time-consuming and require semi-manual interference from lecturers, our system seeks to solve these issues by using face recognition in the process to save time and labor. And no need for installing complex hardware for taking attendance in a classroom

REFERENCES

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2.http://dlib.net/
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