Software Engineering Report

Project Name: An Automated and No-Touch Attendance System

Members:

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Problem Statement:

Traditional attendance marking technique suffers from many flaws. The face recognition attendance system emphasizes its simplicity by replacing classical attendance marking techniques.

Features:

The expected features of this system would be:

- To detect the face segment from the image.
- To extract the useful features from the face detected.
- To classify the features in order to recognize the face detected.
- To record the attendance of the User.
- To notify each user that his/her attendance has been marked.

Requirements:

- Cameras
- Access to organisation’s database
- Access to images of individuals
- Internet

Detailed working:

The human face is a unique representation of individual identity. Face recognition is defined as a biometric method in which identification of an individual is performed by comparing real-time captured images with stored images of that person in the database. The methodology flow begins with the capture of image by using a simple and handy interface, followed by pre-processing of the captured facial images, then feature extraction from the facial images, subjective selection, classification of the facial images to be recognized.

A camera clicks pictures of the individuals. These images are then matched using AI to the available images, useful features extracted from the images and classification done in order to identify the individual. Then their attendance is marked using the details that are retrieved from the organisation's database.

A notification is then sent to the person confirming that his/her attendance has been marked and the changes updated in the database. There will be a private log-in so that every individual can see only his/her record. Authorised personnel can view and edit the attendances.

Workflow: