Automatic student attendance tracking

Team members

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Existing problem

- Student’s attendance in the classroom is a very important task
- The existing method of taking attendance consumes a finite of amount of time which can be used for other productive action.
- We are focused on addressing this problem on schools and universities only.

Motivation

- We found this problem in many universities
- We want a reliable system which tracks the entry and exit of the student from the class
- This system must not be complex and very easy to interact with it

Existing Recognition systems

- The systems can be broadly classified :
  - Systems that uses human characteristics like fingerprint
  - Systems that uses unique objects that the person carries like ID card

Fingerprint based recognition system

- Distracts the attention of students during lecture time
- Queuing takes place

RFID based recognition

- Possibilities that Fraudulent may occur
- Cheat the system by giving proxy (for example a student misuse it by wearing another student’s ID card

IRIS based recognition system

- Cant use a regular camera
- Visible light must be minimized for maximum accuracy

How we approach it

- Attendance is monitored and marked present or absent depending upon the time he/ she enters or exits the class .
- We found that facial recognition overcomes some of the problems that exist in the previously mentioned attendance systems
- Any facial recognition has 2 steps
  - Facial detection – the process of finding a face in a given image
  - Facial recognition – the process of identifying the person form the face (example : face id in apple)

Idea about hardware

- Camera is installed in both side of the doors
- The role of the camera is just to take pictures
- But the process of facial recognition takes place in another place to decrease the burden on camera