

Transport attendance using Face detection in an organization

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Abstract: It is the research illustrates the total attendance maintenance in the transportation system and this may change the way of maintaining the attendance report. This system works based on the face detection, infers the details about pick up time, drop time and location of the students. It can be maintained without any manpower requirement and its reporting is done based on day-to-day attendance on time. It can send an alert notification to the parents and an organization authority. This reduces the risk of the management on monitoring the students transport activities on day-to-day basics. This proposed system can also send the where about of any students to their parents if that particular student has not gotten off the college/school bus in his usual/actual stop.

1. Introduction

This research illustrates how facial detection is used to mark students' attendance with the help of trained images and compares it with the student who is in front of the digital camera to register their attendance in the maintenance of the transportation system in an organization. This research illustrates the total attendance maintenance in the transportation system and this may change the way of maintaining the attendance report. This system works based on the face detection, infers the details about pick up time, drop time and location of the students. It can be maintained without any man power requirement and it' reporting is done based on day-to-day attend ancon time. It can send analects to if citation to the parent sands an organization authority. This reduces the risk of the management on monitoring the students Tran's port activities on day-to-day basics. This proposed system can also send the whereabouts of any students to their parents if that particular student has not gotten off the college/school banishes usual/actual stop. Problem Statement of this research paper is in school/institution bus, there is no proper maintenance of attendance, hence, there is a possibility for an unusual activity and anyone can pick up the children (kidnapping). Finding it hard to choose a mode of communication to ensure the safety of a kid. We can't able to locate them while dropping and picking up the students. There is no proper evidence about their dropping place as well as date and timing.

2. Literature survey

In this review of the literature survey the review showed of the monitoring system of the members or the students across the persons who are using the institutional transport system will be monitored by this method. In this system increases the security of the children during the daily transportation in the institutional, as discussed, the monitoring systemic based on the biometric identification like the finger print. Unique mark Based acknowledgment frame work: In the Fingerprint-based existing participation frame work, a convenient finger impression gadget should be arranged with the understudy's finger impression prior. During the talk hours or previously, the understudy needs to record the unique mark in the designed gadget that guarantee in their participation for the all times. The issue with this research approach during the talk time it might divert the mode consideration of the understudies. [10]RFID is the Radio Frequency Identification Based acknowledgment framework: In the RFID RF-ID-based on the existing frame work, the Understudy needs sot convey Radio Frequency Identity Card with them and put the ID on the card peruse to record their presence for the afternoon. The frame work is fit to associate with RS232 and record the participation to the saved in formation base. There are opportunities for fake access that happen. Few are understudies might utilize different understudies ID to guarantee their presence when the specific understudy is missing, or they even attempt to abuse it some of the time. Facial patterns Based Recognition System: In the patterns in the face-based understudy participation framework, the understudy needs to remain before a camera, so the camera will filter the facial patterns. The checked iris is coordinated with information of understudy put away in the data set and the participation on their presence needs to be refreshed. This decreases the paper and pen responsibility of the employee of the foundation. This likewise decreases the possibilities of intermediaries in the transport and helps in keeping up with the understudy records safely.

3. Objective of the Research

The proposed framework will diminish the desk work where participants will never again include any manual recording. The new framework will likewise diminish the absolute time expected to do participation is in the recording. The newframe-

work will procure individual participation through facial acknowledgment to get information precision of the participation. Time line of the students is maintained while dropping and picking of the students where we can monitor the timeline of the passengers online. Location is recorded- we can able to locate the while dropping and picking of the students and the location is marked. Face of the student is been detected using the patterns to mark the attendance. Date and Time of student records are maintained in a database for all working days, no manpower required is requires since it is a device connected online. The report is sent to the management on every day basis. In this research the methodology explains the working and the flow of the modules present in it and in this research we mainly use the Raspberry pi 4B model board with the minimum specification of 2gb RAM, we also use the ESP 32 camera module that is used for capturing the images, The ESP 32 cam is having the Wireless connectivity: Wi-Fi: the main usage of the Wi-Fi is to get the local connectivity, and also it has the Peripheral interfaces in it. To activate the function of the camera module we use the PIR sensor that helps to activate the camera module by sensing the environment by the thermal sensation of the body temperature of the humans and the signals are to be sent to the board to activate the camera module and then the image is captured and then the face is to recognized by the faced election method. The PIR sensor has the specifications of range capacity of up to 10 meters (30 feet) approximately, we can able to use the sensor in the place where it has the single entrance and it is recommended too. To say about the python script which we have used in the coding part, we consider the python script as a main language to code in the because the Raspberry Pi Foundation selects the language Python as the main language because of its plat form independency, user friendly, object oriented programming and ease of use in our search in our topic as well.

4. Research methodology

Later the captured images are stored in the form of the captured formats like photos and the location and the timing details are stored in it and the attendance is been recorded and the intimation after the recognition the face of the person will be acknowledged to the responding persons. The images are transferred to the Google drive through the Google drive API this becomes big advantage because the images becomes like an evidence of their activity and it can be visible only for the restricted users only because the photos are under the privacy control.

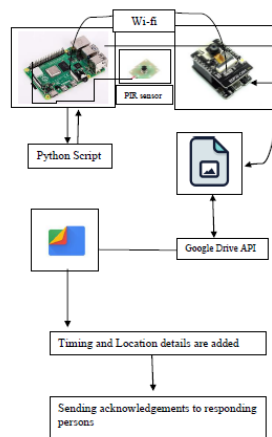


FIGURE 1.

The advantage of the research: Time line of the students are maintained, Location is recorded, Face of the student is been detected, Bus records are maintained for all working days, No man power required, Content is reported to the management every day. Implementation: Organizational transports, Office staff busses, Places that require attendance intrans port, School and college busses. Our working steps And Face Reorganization Part

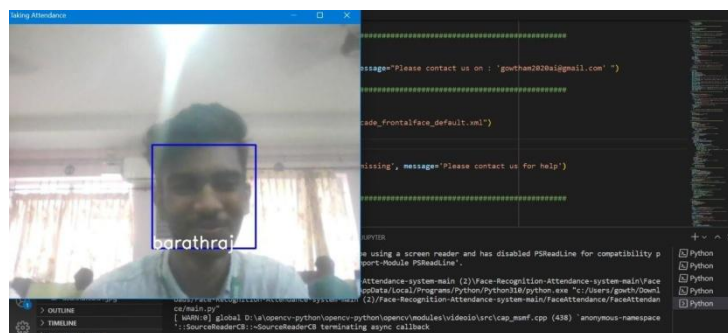


FIGURE 2 :

The mentioned image refers the recognition fast dent face: Preload the facial details of the students. Enter the detail soft he students. Load in to the dataset. Verify the entered detail with their required registered number and according to their department. Get the preloaded dataset. Implementation the research. Setup the modules properly. Hard ware specifications: Raspberrypi4B board (2gbram), Wi-Fi connection, Bluetooth connection, Memory card and slot, USB ports, ESP-32CAM, PIR sensors, GPS Locator, Wi-Fi Dongle. Software specification: Python, Google DRIVE storage, Visual Studio code,

5. Conclusion

This project illustrates the total attendance maintain things in the entire transportation system and this may change the way of maintaining the transport attendance. This system of detection is working under the face detection and the picks and drop time and location of the students can be maintained without in required of any manpower and its reporting the regular day-today attendance on time. This reduces the risk of the management on monitoring the students transport activities son day- today basics.

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