

Faculty Members Presence in Department by Face Recognition (FMPFR)

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ABSTRACT

We have proposed a method for real time human detection & counting of visitors in hotel using a web camera. Normally when an employee get a break of one or two hour for launch. He went to a hotel for launch but hotel is fully reserved. He went to another hotel but situation is same there. That is also fully reserved. In this way he lost his maximum time of launch break. This is a big issue that mostly people lost their break time in finding place in hotel. In this approach we will design a website where list of hotel of a different cities are present and when the user select his desired hotel name he will see that how many place in that hotel is available and how many tables are reserved in hotel. This enlisting is a onetime procedure and their face will be put away in the database. Amid enlisting of face we require a system since it is a onetime procedure. You can have your own move number as your representative id which will be novel for every worker. The nearness of every worker will be refreshed in a database. The outcomes indicated enhanced execution over manual participation administration system this item gives significantly more arrangements with exact outcomes in client intuitive way instead of existing leave administration system.

Keywords :- Web camera, Security check, Pattern lock, Digital attendance

I. INTRODUCTION

In this system that send the request to camera to image from the live video streaming. The camera take image from the live video streaming and send it back to system. The system decompose the image then divide it into segmentations. When it is segmented pattern and features are extracted from it. It is then stored in database and generate output which is shown on some type of medium.

- The conduct structure of the utilization case confront acknowledgment is decentralized.
- The utilize case conduct is a decentralized stream of occasions.

Because taking part protests discuss specifically with each other, not through at least one controlling items.

A. Collaboration Diagram

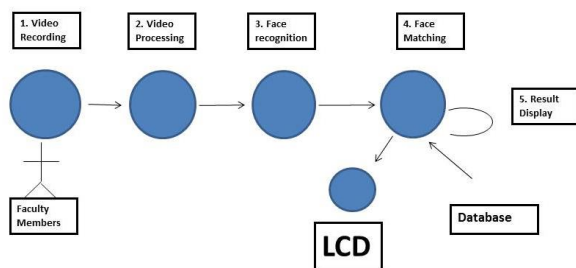


Figure 1: Collaboration Diagram for overall system

B. Objectives

- Insertion of faculty member's images in data base.
- Capturing the images through camera.
- Comparing the database and captured images.
- Display the result on LCD or LED.

C. Existing System

Faculty rooms in department.

Meeting rooms in department for teachers.

Signboard on the doors of rooms of faculty members.

Searching any faculty member in department is much difficult manually.

D. Problem Statement

Teacher student interaction comes a lot of time in a day in order to check in order to check availability of teachers. She/he knocks and looks in different classrooms. By watching in different classrooms for searching the teachers that are teaching in the classroom are disturbed and in this way students also disturbed. A lot of time is wasted in searching for any faculty member and teacher in department. Such a system is required that tells him/her about the presence of faculty member or teacher in department. For this purpose, in department implementation of FMPFR system plays an important role in searching particular faculty member or teacher.

II. LITERATURE SURVEY

Marian Stewart Bartlett et al.2002 reported in Face Recognition by Independent Component Analysis various current face acknowledgment calculations utilize confront

portrayals found by unsupervised measurable techniques. Commonly these techniques locate an arrangement of premise pictures and speak to faces as a straight mix of those pictures. Primary segment examination (PCA) is a famous case of such techniques. The premise pictures found by PCA depend just on pairwise connections between pixels in the picture database. In an undertaking, for example, confront acknowledgment, in which vital data might be contained in the high-arrange connections among pixels, it appears to be sensible to expect that better premise pictures might be found by techniques delicate to these high-arrange insights. Autonomous part investigation (ICA), a speculation of PCA, is one such technique. We utilized a form of ICA got from the standard of ideal data exchange through sigmoidal neurons. ICA was performed on confront pictures in the FERET database under two unique designs, one which regarded the pictures as arbitrary factors and the pixels as results, and a second which regarded the pixels as irregular factors and the pictures as results. The main engineering discovered spatially neighborhood premise pictures for the appearances. The second engineering created a factorial face code. Both ICA portrayals were better than portrayals in light of PCA for perceiving faces crosswise over days and changes in demeanor. A classifier that consolidated the two ICA portrayals gave the best execution.

Lydia Pleotis Howell et al.2016 reported in The Role of Reimbursement Criteria to Lessen Face-Time Bias and Maintenance Faculty Career Tractability: An Methodology to Increase Career Fulfilment in Hypothetical Pathology, work-life adjust is vital to enlistment and maintenance of the more youthful age of therapeutic personnel, yet restorative school adaptability strategies have not existed completely powerful. We have revealed that our institute's approaches remain underutilized because of staff worries about looking casual to profession or group. Since arrangements incorporate leaves and facilities that lessen somatic nearness, staff may fright "publicity predisposition," which adversely influences assessment of those not "seen" at work. Publicity inclination is accounted for to adversely influence pay and profession advance.

Pirah Noor Soomro et al .2014 reported in Human Detection and Counting in Crowded Scene, Group observation is a functioning point of research these days. Expanded lawfulness circumstances have extraordinarily frightened the security associations to enhance security benefits in every one of the fields particularly when security of group is brought under thought. Group observation is unique. In swarm there is blockage, commotion and substantial number of individuals which are disseminated in arbitrary way which cause much trouble for security officers. In this way presently swarms are filtered by cameras and are handled in PC for observation and for getting data of the scene. Numerous methodologies have been proposed in this unique circumstance. Keeping in see the multifaceted nature of scene in the space of PC vision we run over the enormous issue of impediment. A definitive arrangement required is the system which beats the issue of impediment.

A. Drawbacks Of The Present System

The significant drawbacks of the current system were as per the following:

It was a paper based system.

A lot of time is wasted in searching for any faculty member and teacher in department.

The faculty members should pass in front of camera in the range of 75-105 degree angle keeping the face towards camera otherwise system is not work properly.

B. . Scope of the System

Scope of the System is based on two phases

Phase I:

In this phase we will store images of faculty member in DBMS for first time.

Phase II:

In second phase these images that are stored in DBMS are compared with the faces detected from the streaming video through the camera.

C. Summary of Requirements (Initial Requirements)

1. First requirement is to store the images of faculty members and teachers
2. Second requirement is that as any one enter in department make comparison with the images that are already stored.
3. It should display on a screen that is in the entrance of department that which teacher or faculty member is present in department or not.

Classifying External Entities:

The recognizable proof of the outer elements will be founded on the data contained in your Abstract. This recognizable proof is done after two stages.

Entities from Abstract:

On basis of abstract the entities for the system are

- Display
- DBMS
- Faculty Member
- Camera
- Teachers
- Images

D. Perform Refinement:

Basic entities that are used after refinement of entities taken from abstract

- Display LCD
- Teachers/Faculty Members
- Camera

E. Capturing "Shall" Requirements:

| No: | Initial Requirements |
|-----|---|
| 1 | First time images shall store in DBMS system. |
| 2 | The system shall take images from the live streaming video. |

| | |
|---|---|
| 3 | Then system shall make comparison the images taking through camera with images store in DBMS. |
| 4 | System shall show on Display device the result. |

F. Allocate Requirements:

| No: | Initial Requirements | USE Case |
|-----|---|--------------------|
| 1 | First time images will store in DBMS system. | UC_image_insertion |
| 2 | The system shall take images from the live streaming video. | UC_image_video |
| 3 | Then system shall make comparison the images taking through camera with images store in DBMS. | UC_comparison_DBMS |
| 4 | System shall show on Display device the result. | UC_Display_result |

G. Highlight Requirements:

Necessities must be arranged as this will help accomplish tasks easily. Overgrown them as “highest, medium, and lowest”.

| N o | Rank | Initial Requirements | USE Case | USE Case ID |
|-----|-----------|--|--------------------|-------------|
| 1 | “Medium” | First time images will store in DBMS system. | UC_image_insertion | UC_1 |
| 2 | “Medium” | The system shall take images from the live streaming video. | UC_image_video | UC_2 |
| 3 | “Highest” | System shall make comparison the images taking through camera with images store in DBMS. | UC_comparison_DBMS | UC_3 |
| 4 | “Medium” | System shall show on Display device the result. | UC_Display_result | UC_4 |

H. Requirements Traceability Environment:

The necessities trace-ability environment is a table used to suggestion project life cycle events and work goods to the project necessities. The environment establishes a strand that traces desires from documentation through implementation.

III. METHODOLOGY

A. Application Architecture:

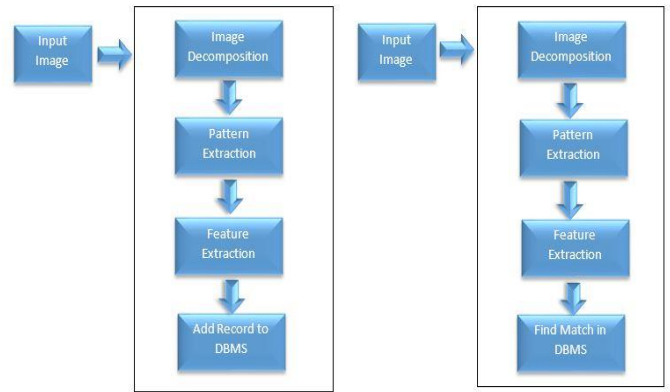


Figure 2: Application Architecture FMPFR

B. Hardware and Software Specification:

- Hardware Requirements
- Core i3
- Minimum 1 GB of RAM
- Mouse
- Keyboard
- Cameras
- LCD or LED
- 5.1.2 Software Requirements:
- Microsoft Windows 7\8\10
- MATLAB R2012a
- DBMS
-

C. Domain Model:

Domain models signify the set of necessities that are common to structures within a creation line. There may be several domains, or areas of proficiency, signified in a only product line and a particular domain may span many product lines. The necessities characterized in a domain model include:

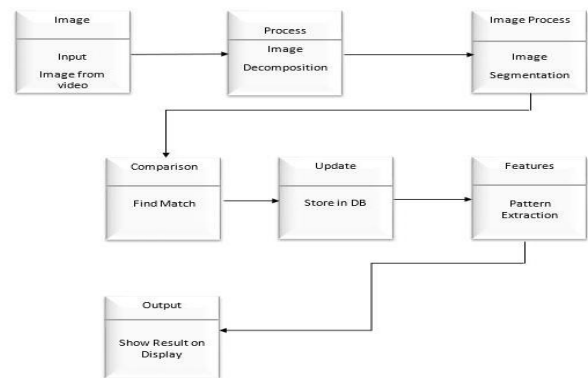


Figure 3: Domain Modal FMPFR

D. System Sequence Diagram:

The UML system sequence diagram (SSD) represents occasions consecutively contribution from an outer

source to the system. The SSD will characterize the system occasions and tasks. System arrangement charts are a course of events drawing of an extended utilize case. Occasions are connected by time with the best occasions happening first. System occasions are the essential things.

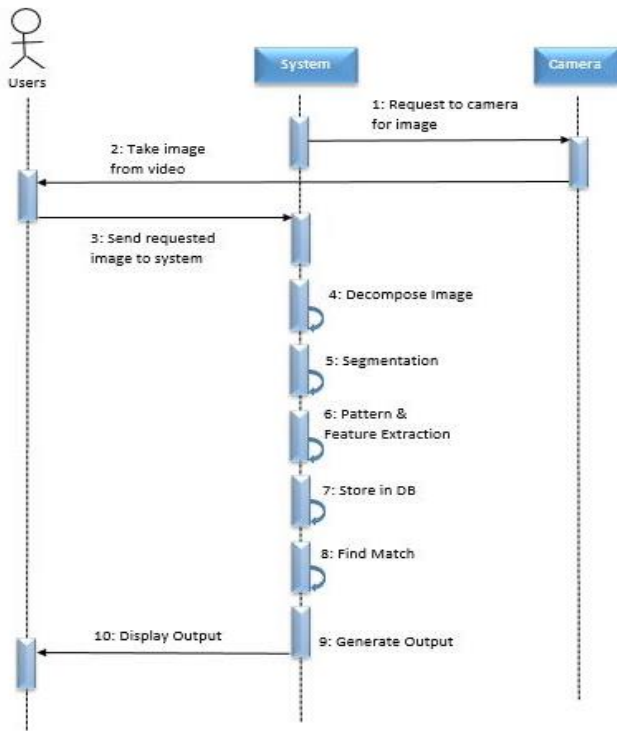


Figure 4: System Sequence Diagram for overall system

E. Use Case Diagram:

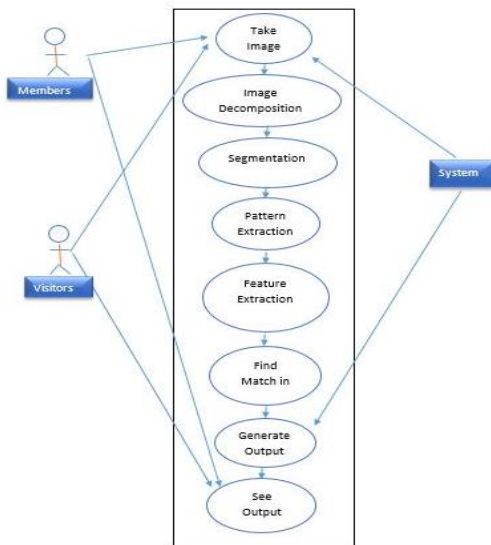


Figure 5: Use Case FMPFR

IV. CONCLUSION

FMPFR system is very beneficial and time saving system and still there can be many conflicts regarding too presence faculty members in department. The proposed system will display on LCD that which faculty member is present in department automatically that’s really beneficial in terms of Saving time for searching any faculty member or teacher in department. Especially for the outsiders.

V. REFERENCES

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