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Criminal Face Identification System

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Abstract: Criminals information usually have the personal details about that person with pictures and other important details. For recognizing any kind Criminal we will be needing some details of that person, which is provided be a person who has witness the crime . In many of the cases the pixels of the already recorded image is very poor and very difficult to identify face. To sort this problem I am making a software. In which identification can be done in many ways like finger print, eyes, etc. One of the applications is face identification. Face is a primary focus of attention in social meetings which plays a very major role in carrying identification Firstly We will be matching the face with the available database. Secondly Putting the analytical component for finding same features from many images to get the similar of the targeted image This will help the law to find or criminal of the case . The results will shows about 90% of input photo will be matched with the stored data. This paper is to propose the criminal face identification system in which the images stored in the database will be matched to the image stored in another database to find out the criminals.

I. INTRODUCTION

Criminal face identification system is to identify the suspect in any investigation .In this we will be storing some images of the criminal along with their information in our database and that images are divided into several part of the face. These mage will be stored in another database.

So when there will be any need to identify any criminal the eyewitness will see the cropped images and will construct an image from those slices and if that new face is matched from the image in our database than that individual will be considered as criminal. Thus using this project any criminal can be identified in a easy way

1) *Administrator:* The administrator is responsible for giving id and password to the operator. Administrator can add, delete, update the user login id.
2) *Operator:* The operator is one who belongs the investigation department. Operator can add , delete, update the information of the criminal from the stored data base. He can also make the new face of suspect by the help of witness.
3) *Eyewitness:* The eyewitness is the main individual in the project. Eyewitness will be seeing the sliced part of the image which is stored in the database of the operator. The eyewitness will be selecting the cropped images in the database and those images will be freezed by the operator and by that a new face is constructed and the whole details will be retrieved from the database for that criminal.

We can also construct a new image from those cropped part which will be considered as an identical face of the criminal.

II. LITERATURE SURVEY

This study is very high level version of the whole system analysis and design process for the recognition of the criminals in any investigation departments. The project begans with eludicating the major problem of identification of criminals manually, which consumes more time as compared to automotive identification. Problem definition is the first step taken, as soon as the problem definition is being generated the analyst start developing the module of the system and the problem is solved if we can produce a logical module which can ascertain and admit the face of the suspect

The existing work explained the working of this model by detecting and recognizing the faces of the suspects in a video stream obtained from a camera in real time[IRJET-Automated criminal identification system using face detection and recognition].

Another survey [AIP-2017] explained that this is an open software which could be maintained very easily and new features can be added in this further.

According , to the editor from techtarget.com, biometric is the security of peoples physical and behavioral characteristics and this technology is usually used in security ventures for identification.

One more survey [IJARCCE-2018] explained the abnormal increase in crime rate which was going against the security issues and the criminal identification system is the primary issue of security terms.

This working on the criminal identification system can help in identification of the criminal of any investigation department very easily. So we are developing the same kind of software which can help in the process of finding out the criminal fast and in a simple manner.

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Some of the feasibility which this software have to keep in minds are as follows:

1) Operational feasibility
2) Technical feasibility
3) Financial feasibility

Nowadays, Face recognition techniques are highly applicable in various fields such as forensic science databases to find the criminal using matching the camera footage with the early stored pictures. It is also using in the social media application for tagging the people by detecting the face from images.

III. EXISTING WORKS

Face detection system has been used by many org. like FBI, CIA, Facebook and other big companies such as Asus, SAMSUNG and so on and it is used for many reason but not limited to help users in identifying, verifying and searching the face of a person over a large data of faces.

Face recognition system works as:

1) It will read input image and pre processed image in which the unwanted elements are removed from the image.
2) The image than is compared with the other image in data base and a image matched message is displayed.

So basically the existing work is all done manually such as identifying the suspect by seeing clicked photographs, seeing the criminal live and trying to identifying them in a sequel or by height or something like this.

So this process is very time taking and very hectic for the witness and the investigation department because they have to find small small clues of the suspect to show the witness.

To just skip this all time taking process this model is being introduced so identifying the suspect can be made easy and correct.

IV. PROPOSED SYSTEM

In this proposed system we will be creating a software which will be helpful to the crime investigation department to find the suspect and for the eyewitness as well who were present at the time of crime or have doubt on an individual.

In criminal face identification system there will be two portals one will be of operator which will be operated by the investigation department, in that the operator can add the information of new criminal, update the details of already existing criminal in the database, and can delete the criminals unwanted details and he can search the criminal from the large database. And second one will be of eyewitness who will be selecting the cropped images stored in the database and from those cropped images they will be constructing a new image and identifying the criminal.

The proposed system will be showing some relations as follows:

1) *Relationship Of Administrator And Employee:* In this the relationship is shown between the administrator and the employee(operator). Administrator will be providing the login portal to the operator. Administrator will be able to keep a check on every portal whether it is of operator or eyewitness.

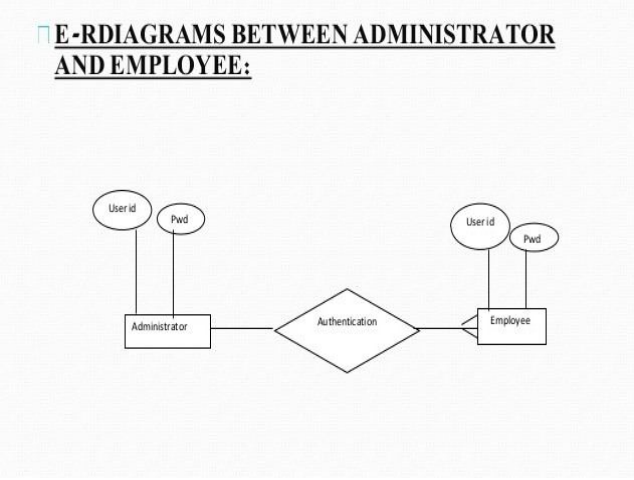


Fig.4.1

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2) *Relationship Of Employee And Eyewitness:* In this the relationship between employee(operator) and an eyewitness is shown. Operator will have the criminal details and images and the operator will be providing a portal to the eyewitness for viewing and selecting the images from the database to construct a new image which will be helping in confirming the suspect.

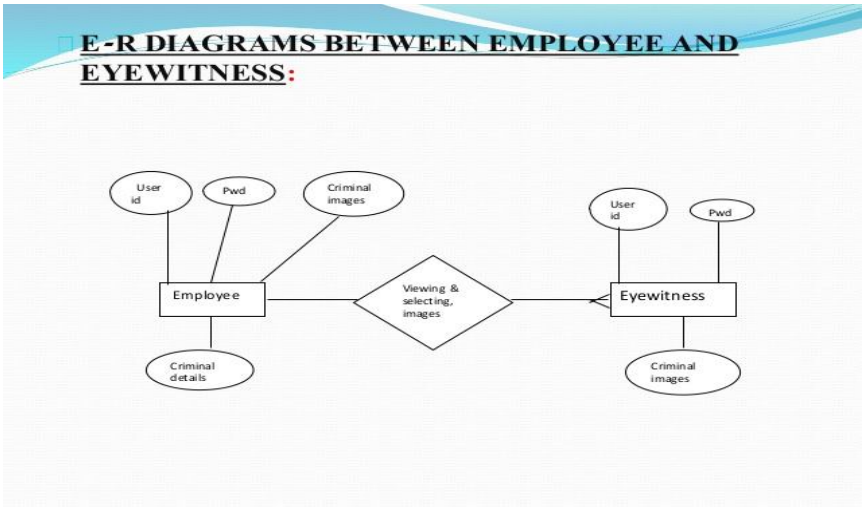


fig.4.2

3) *Relationship of Eyewitness and Administrator:* In this even administrator will be able to keep the check on eyewitness administrator will be checking whether the eyewitness is authorized to this portal only the eyewitness will be able to login the portal for constructing the image.

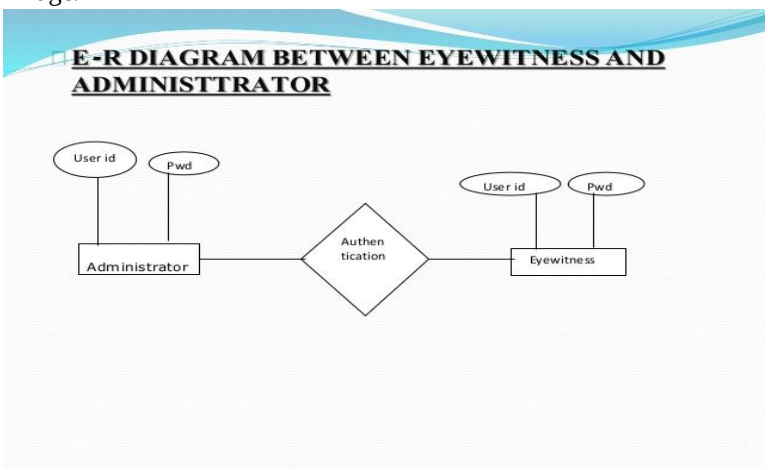


fig.4.3

There are four modules in this project which are as follows:

a) *Add Module:* It will help in the addition of the criminal details along with the image. At the time of adding the image of the criminal we crop the image and we will be storing it in the other database.

b) *Delete Module:* It will be helping to delete the criminal details with the photo. The operator first need to submit the criminal id and search for the available id in the database if it is found than the id will be deleted.

c) *Update Module:* This module is used to update the criminal id. Firstly the operator has to submit the id and search for the availability of the id if it is found than the operator can update the criminal details.

d) *Identifying Module:* The sliced part of the images are seen by the eyewitness and the eyewitness will be choosing the cropped part and it will be frezed by the operator

Our proposed system will be very useful in identifying the criminal as the eyewitness will be seeing the slides of different part of face of different criminal and will be selecting the most appropriate one and the face which will be created by this will be consider as the suspect.

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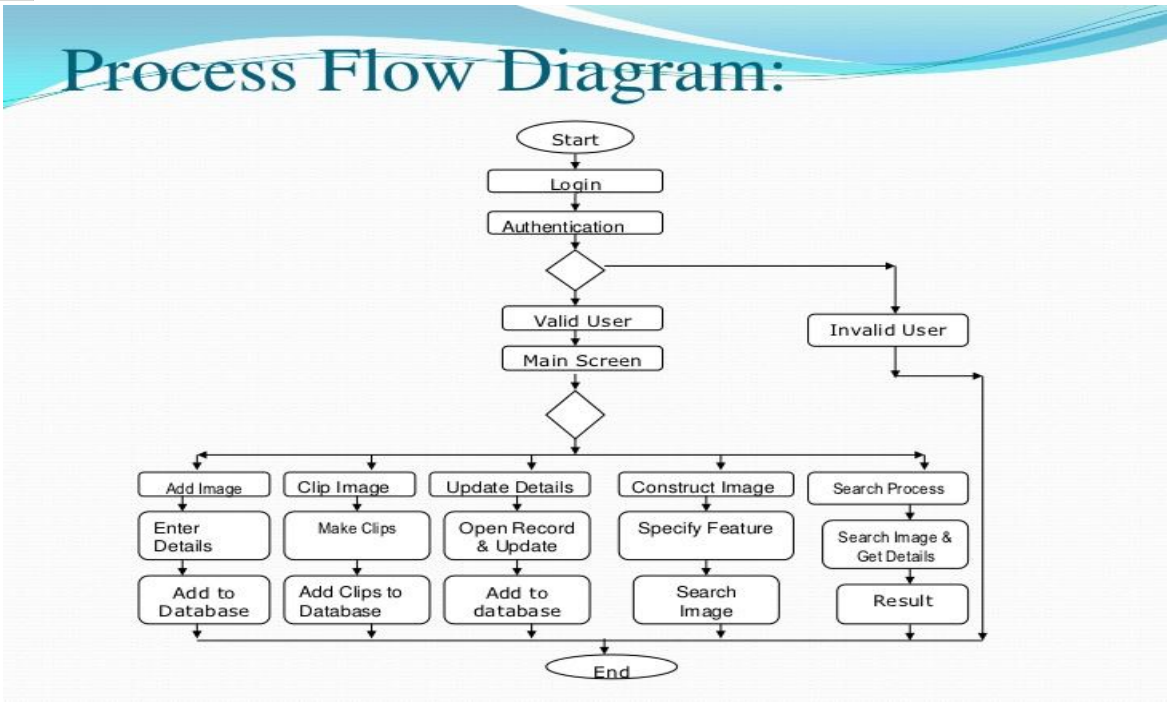


Fig.4.4

V. CONCLUSION AND FUTURE WORK

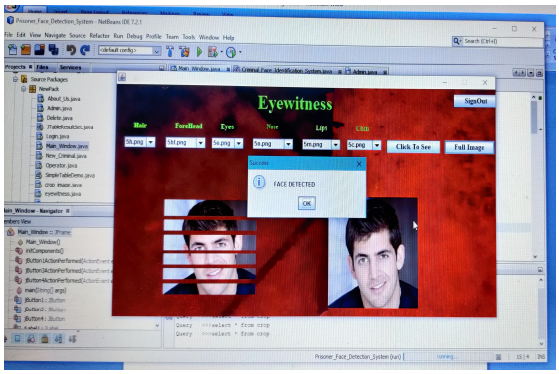
Face recognition has got a lot of attention due to the no. of users in security surveillance, law enforcement, computer applications mand many more.

In future the following updates can be made:

A. The photo can be of any size and any resolution.
B. By just clicking on the one part of the cropped picture the whole image can be made with the suspect details.
C. All new faces can be constructed by different cropped images.
D. We can update this project as an online application, by which any one can report online by detecting the face at that time only.

So we will conclude it as when a suspect needs to be identified the image which is stored in the database will be match to the details of that suspect. Some advantages of this project are as follows:

1) It is very fast and accurate.
2) It does not required any manual efforts.
3) There is no fear of losing the data.
4) Requires very little knowledge to operate the system.
5) No requirement of any extra hardware device.



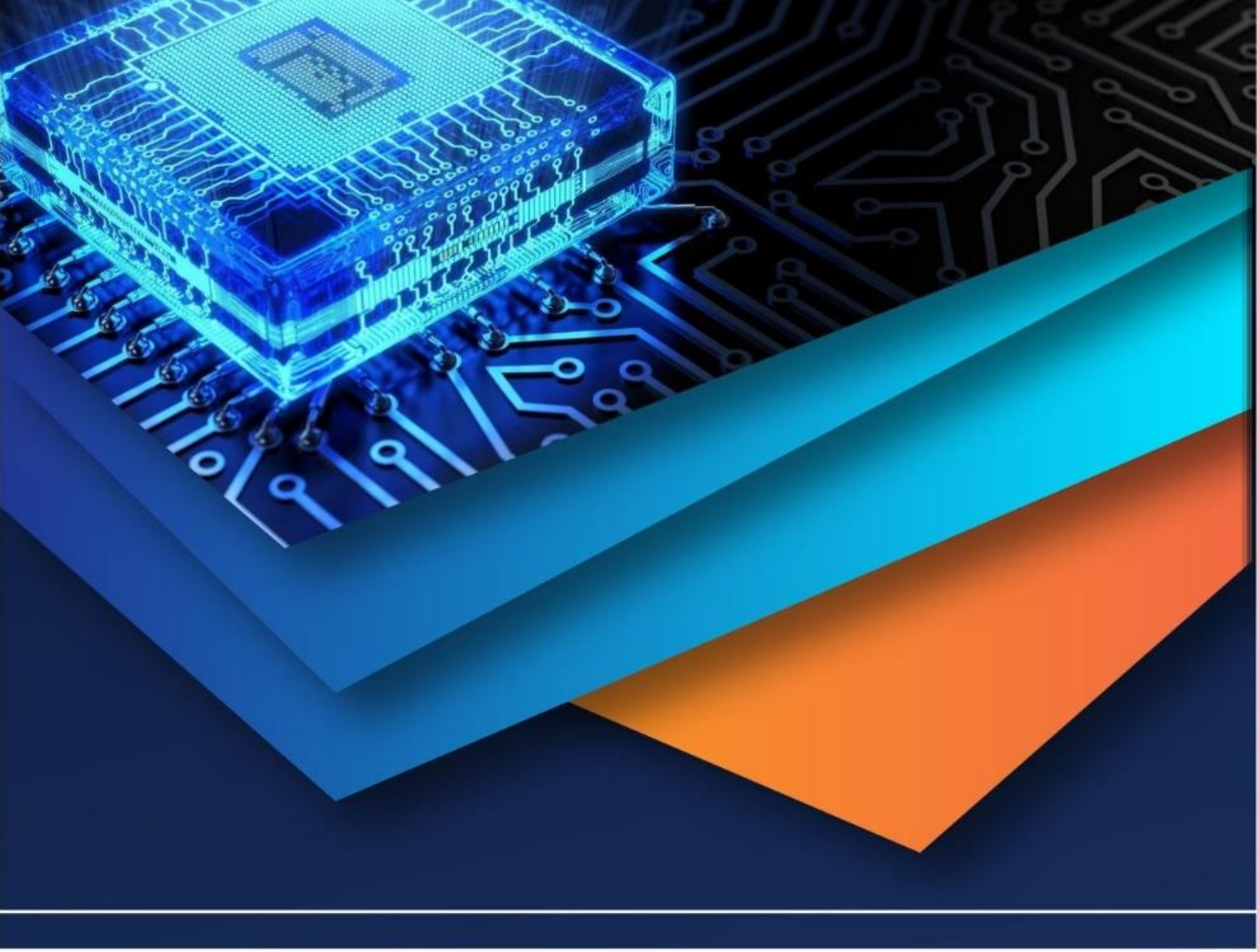
5.1 Output image when the criminal face is matched.

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