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Face Identification System-A Review

Computer Science

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ABSTRACT

Criminal record generally contains personal information about particular person along with photograph. To identify any criminal we need some identification regarding person, which are given by eyewitnesses. In most cases the quality and resolution of the recorded image-segments is poor and hard to identify a face. To overcome this sort of problem we are developing software. Identification can be done in many ways like fingerprint, eyes, DNA etc. One of the applications is face identification. The face is our primary focus of attention in social inter course playing a major role in conveying identity and emotion. Although the ability to infer intelligence or character from facial appearance is suspect, the human ability to recognize faces is remarkable.

The operator first logs into the system by entering username and password. Then depending on the work allotted he has to select the screens from main menu screen. There are mainly three important function which he can do they are adding details, clipping image and finally construction of the face by using the eyewitness. The face that is finally formed is one who has done the crime.

INTRODUCTION

Face Identification is a technique that is mainly used to identify criminals based on the clues given by the eyewitnesses. Based on the clues we develop an image by using the image that we have in our database and then we compare it with the images already we have. To identify any criminals we must have a record that generally contains name, age, location, previous crime, gender, photo, etc.

The primary task at hand is, given still or video images require the identification of the one or more segmented and extracted from the scene, where upon it can be identified and matched. The word "image is defined as" an exact or analogous representation of a being or thing." The image or monochrome image such as black and white paragraph is represented as two-dimensional light intensity function f (x, y) where x and y denotes spatial co-ordinates. A digital image is an image of f (x, y) that has been digitized both in spatial co-ordinate and brightness[1]. The elements of such a digital array are called image elements, picture elements and pixels.

PURPOSE:

This project is aimed to identify the criminals in any investigation department. Here the technique is we already store some images of the criminals in our database along with his details and that images are segmented into many slices say eyes, hairs, lips, nose, etc. These images are again stored in another database record so to identify any criminals; eyewitnesses will see the images or slices that appear on the screen by using it we develop the face, which may or may not be matched with our images. If any image is

matched up to 99% then we predict that he is only the criminal. Thus using this project it provides a very friendly environment for both operator and eyewitness to easily design any face can identify criminals very easy.

OBJECTIVE:

This project is intended to identify a person using the images previously taken. The identification will be done according the previous images of different persons.

SCOPE:

The scope of the project is confined to store the image and store in the database [2]. When a person has to be identified the images stored in the database are compared with the existing details.

OVERVIEW:

This project can be used to identify a criminal in the investigation department. The project maintains the photographs of all the criminals. Each photograph is clipped into different parts.

EXISTING SYSTEM:

The development of face identification has been past from the year to years. In recent years to identify any criminal face they used to make a sketch or draw a image based on the eyewitnesses. It used to take more amount of time and it was very difficult task for any investigation department to easily catch the criminals within a stipulated time. In order to catch the criminals first they used to search their record whether to find out is there any record about that particular person in the past. In olden days each and every record was maintained in the books or registers or files which used to contain information about previous criminals with their names, alias name, gender, age, crime involved, etc. Here each and every task used to take the help of the person because they used to write in them and it needed very much of manual effort.

There are three major research groups, which propose three different approaches to the face recognition problem. The largest group has dealt with facial characteristics. The second group performs human face identification based on feature vectors extracted from profile silhouettes. The third group uses feature vectors extracted from a frontal view of the face.

DRAWBACKS IN EXISTING SYSTEM:

- Need of extra manual effort.
- It used to take much time to find any criminals
- Not very much accurate.
- Danger of losing the files in some cases.
- Need Good Knowledge in drawing.

SYSTEM:

To overcome the drawbacks that were in the existing system we develop a system that will be very useful for any investigation department. Here the program keeps track of the record number of each slice during the construction of identifiable human face and calculate maximum number of slices of the similar record number. Based on this record number the program retrieves the personal record of the suspect (whose slice constituted the major parts of the constructed human face) on exercising the "locate" option[3].

ADVANTAGES OF PROPOSED SYSTEM:

- Very fast and accurate.
- No need of any extra manual effort.
- No fever of data loss.
- Just need a little knowledge to operate the system.
- Doesn't require any extra hardware device.
- At last very easy to find the criminals.

OVERVIEW OF THE PROPOSED SYSTEM:

- Addition, Clipping, Construction and updating of the criminal record and face.
- If any new images are found then it should be entered into our database by add image
  module and then it should be segmented into different slices.

DESIGN PRINCIPLES & EXPLANATION

MODULES

- Add Image
- Clip Image
- Construct Image
- Identification

A module is a small part of our project. This plays a very important role in the project and in coding concepts. In Software Engineering concept we treat it has a small part of a system but whereas in our programming language it is a small part of the program, which we also called as function in, some cases which constitute the main program [4, 5].

Importance of modules in any software development side is we can easily understand what the system we are developing and what its main uses are. At the time of project we may create many modules and finally we combine them to form a system.

MODULE DESCRIPTIOIN

ADD IMAGE

Add Image is a module that is considered with adding image along with the complete details of the person of whom we are taking image. In this we add Image by importing from the Internet and store them in our system and database. This module is mainly considered for adding details of the criminals like name, age, alias name, gender, location, state, Arrested Date, etc. At the time of the adding image we give some criminal id to that particular person, so that it can be easily added to the database with any duplication of the data [6, 7].

CLIP IMAGE

This modules main function is to divide the images into different pieces such as hairs, forehead, eyes, nose and lips and store them in the database and also creates the files onto our system.

Figure:1 Face Identification

CONSTRUCT IMAGE

Based on the eyewitnesses we are going to construct the images. The witness will give us instruction by looking onto the screen on which there will be the parts of the images like eyes, hairs etc

IDENTIFICATION

This module contains the interface to take the image from above module and it compares or searches with the images already there in the database [8, 9].

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