



Criminal Tracking System using CCTV

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Abstract: *As a crime is going at its edge, it has become difficult For cops to handle this crimes and track the criminals. So this paper proposed a system of tracking criminals using CCTV. This system recognizes the criminal by taking the images from live streaming CCTV footage and comparing it with the criminal database and displays particular information if the image matches with the database contain. It uses the HAAR's algorithm for face detection and the EIGEN values for recognition. one to one feature selection is used such as eyes, nose, lips. It is advanced of previous system which matches the image after the crime has taken placed.*

Keywords-*Image processing, DBMS, CCTV(closed circuit television).*

I. INTRODUCTION

Extraction of discriminative features from salient facial patches plays a vital role in effective face recognition. The accurate detection of facial landmarks improves the localization of the salient patches on face images. This paper proposes a novel framework for face recognition by using appearance features of selected facial patches. A few prominent facial patches, depending on the position of facial landmarks, are extracted which are active during emotion elicitation. These active patches are further processed to obtain the salient patches which contain discriminative features for classification face, thereby selecting different facial patches as salient for different pair of face classes. One-against-one classification method is adopted using these features. In addition, an automated learning-free facial landmark detection technique has been proposed, which achieves similar performances as that of other state-of-art landmark detection methods, yet requires significantly less execution time. The proposed method is found to perform well consistently in different resolutions, hence, providing a solution for face recognition in low resolution images.

Purpose: The cameras may be able to assist in the detection and arrest of offenders. This crime prevention mechanism requires that police can respond in a timely manner to any significant incidents identified by camera operators, and that the local criminal justice system can pursue the offenders' conviction. An important consideration in the effectiveness of a surveillance technology is the type of crime to be tackled, because this impacts the criminals' ability to adapt.

Overview: A description of the system is provided, including a product perspective, user classes and characteristics, constraints, and assumptions and dependencies. In addition, this document describes external interface requirements and provides support information for the entire system, including a state-transition diagram, overview of use-cases present in the system, and glossary of terms. In addition to these sub feature specifications, various use-case realizations (analysis models) have been provided to further explain features and interactions between components of the system.

II. LITERATURE SURVEY

Closed circuit television better known as CCTV refers to a system that uses security cameras to feed images to a centralized location or control room. These systems have been around for years, but have recently evolved into an incredibly reliable security platform, with cameras that can follow motion and capture minute details in full color.

Storage: Security cameras utilize digital video recorders, or DVR, to remotely operate, capture video and save that footage internally.

Networking: CCTV systems can also use IP (Internet Protocol) to send digitally formatted images to specified networks, ranging from a control room monitor to your computer or mobile phone.

CCTV is the surveillance solution of choice for high traffic areas like airports, banks, terminals and malls. These systems allow users to remotely patrol the insides and outsides of buildings, reducing the need for extra manpower and increasing the capabilities of existing personnel. And if you are wondering, CCTV technology can be used in your home as well! So if you think it is time to finally give your home or business some added protection, then call Chesapeake Systems Services. CSS specializes in the design, installation, service and monitoring of security and fire alarm systems, access control and closed-circuit television (CCTV) for both residential and commercial markets. Our monitoring representatives are trained, friendly and helpful dispatchers watching over your home or business 24 hours-a-day, 365 days-a-year. The monitoring service will follow through on any alarm that your security control panel detects. We also provide a Builders Service program that allows you to meet with a consultant and choose the best technology

selections that you feel will meet your needs. If you have any questions or wish to set up a consultation with one of our security experts.

III. CRIMINAL TRACKING SYSTEM MODEL

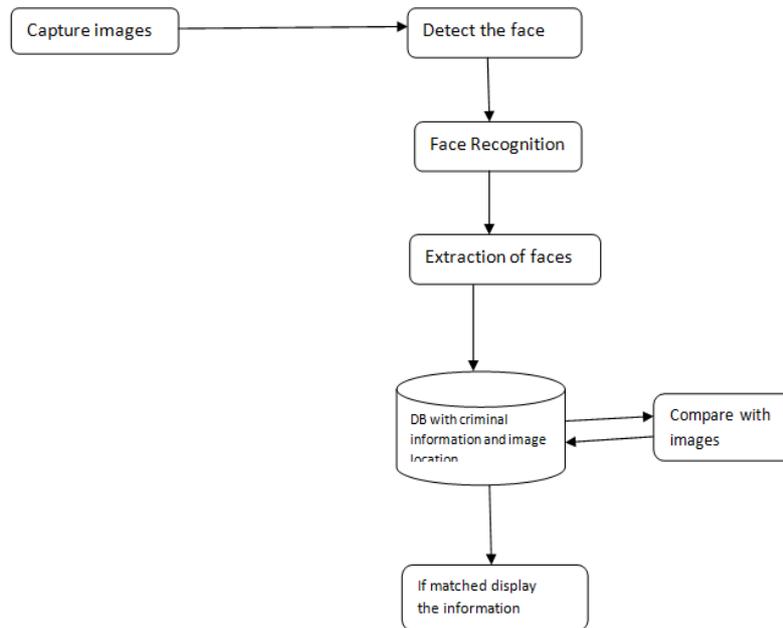


Figure 1. Basic Architecture

III.1. Capture Image

This is the primary step of system which take the images using CCTV in jpg format and provide to face detection phase unit.

III.2. Detect the face

In this step it takes the input from the CCTV and detects the face portion from image and extracts it.

III.3. Face Recognition

It extract the important facial patches such as eyes, lose, and lips in form of a pixel values

III.4. Compare with image

It compare the input images with the images which are already stored in database.

III.5. Display

It displays the information of the person in the image if the match is found in the database. Else no match found is displayed.

III.6. Haar's Algorithm.

HAAR algorithm is a facial expression recognizing algorithm. It extract the active facial patches and represent in the form of pixel values. This pixel values are compared with the predefined pixel values for different emotions. And determine type of emotions.

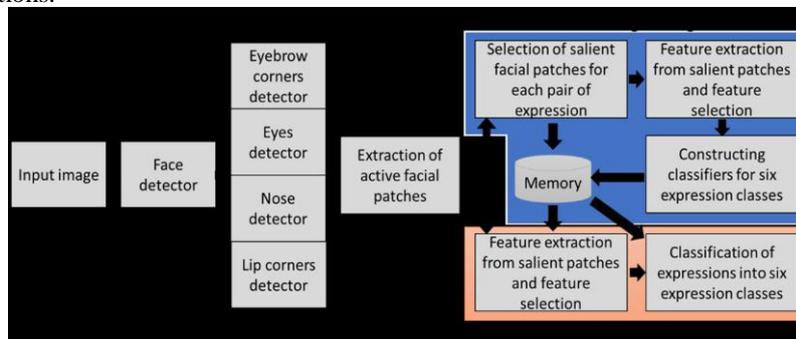


Figure 2. Working of HAAR algorithm

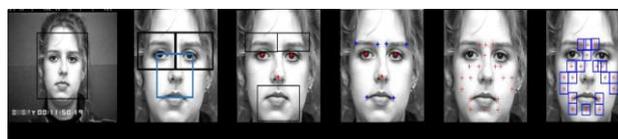


Figure 2. Detection of Active facial patches

IV. PROPOSED SYSTEM

The criminal tracking system is proposed to identified and recognized, so HAAR algorithm is used in system to extract the facial patches such as eyes, nose, and lips in form of pixel values. This values are diffent and particular for different faces which can be used to identified and recognized face of criminal.

V. CONCLUSION

In this paper We have presented a Criminal Detection using CCTV. Several desirable properties are embedded in Software. Generic user can Detect Criminals by using this smart system. This software Helps to improve Security and Prevention of Criminal Activity.

REFERENCES

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