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"CENTRALIZED CRIME DATA BASED USING BLOCKCHAIN FOR FAST INVESTIGATION OF CRIME IN HUMAN TRAFFICKING"

Prof. G. B. Kalkhamkar[a], Nikita N Patil[b], Sneha M Ghulanawar[c], Madhuri S Bhaigade[d].

[a]*Assistant Professor. Department of Electronics and Telecommunication Engineering. Sant Gajanan Maharaj College of Engineering Mahagaon, Kolhapur, Maharashtra. India 416503*

[b,c,d] *Student, Department of Electronics and Telecommunication Engineering. Sant Gajanan Maharaj College of Engineering Mahagaon, Kolhapur, Maharashtra. India 416503*

ABSTRACT

In this essay, we've talked about the problem of criminal investigations being held up in cases of human trafficking. To record the victim's or a criminal's identification, we are using blockchain technology. According to the criminal's or victim's information, if a criminal or victim is discovered in an airport or other crowded area, his face will be recognized. The victim's or criminal's detected face and data are compared to our database. It will be mailed to the closest police station if the registration information matches. With gps location and other information on the offender or victim

1. INTRODUCTION

We used face recognition in the current work to identify theculprit and victim after being motivated by the points of purpose. The basic idea of our article is to experiment with profoundly literal neural networks to detect and respond to ongoing crime with an effective system for following people and discovering crimes to lower the crime rate. The initiative employs face recognition to identify possible criminals on live surveillance footage, gathers data for analysis, and aids in person tracking.This is one of the latest technologies being studied in the biometric field as it has a wide field of application. But face recognition is one of the challenging problems in image processing. The basic purpose of face detection is to determine if there are faces in an image and then to locate a face's position in an image. Obviously, face recognition is the first step in creating an automated system, which may involve other face processing. [Ref.1] Face analysis in computer vision technology has two modes of operation, face recognition (recognition) and face authentication (verification), where face recognition is a one-to-many match, comparing the unknown query image with the set of images known in the database are, while face authentication is a one-to-one mapping, it compares the challenge image to the image of the person. The face verification process using Convolutional Neural Network (CNN) and Constrained Local Model (CLM) for face alignment. [Ref.3]. These properties are captured pixel by pixel. The proposed system can be used as a module for facial recognition systems, video surveillance systems, access control systems. The system combines two methods, one based on features and the other based on images, to recognize faces more accurately and give a faster response to work in real time. Restriction: The image you have the same colour properties as the skin colour model are difficult to identify, and the robustness of the system can be improved by using larger training sets. [Ref.4]. The facial action coding system (FACS) has recently received significant attention. Automating FACS coding would make the research faster and more widely applicable. Opening new avenues to understanding how we communicate through facial expression. [Ref.9]

Since it happens in practically every country, human trafficking is a severe violation of human rights and a global problem. The main goal of human trafficking is to transport victims to international borders so they can work. The majority of those killed in human trafficking are women and children..

2. PROBLEM STATEMENT

Today's generation is captivating towards the social media and this is the main cause of human trafficking. Traffickers use violence, employment agencies, and fake promises of education and job opportunities to trick, force and cheat the victims. In day today life, human trafficking is a big global issue in our country and the identifying victims and criminals in human trafficking can be difficult because of traffickers often isolate victims from their families and the communities.
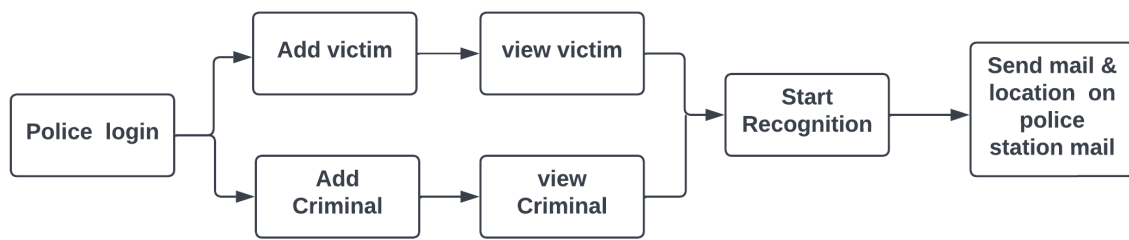
3. PROPOSED METHODOLOGY

3.1 Block Diagram:

Fig.3.1 Block Diagram of Proposed system

3.2 Description of Proposed system:

The issue of prolonged criminal investigations in cases of human trafficking. We are utilising blockchain technology to keep track of a victim's or a criminal's identify. If a criminal or victim is found in an airport or another popular area, his face will be recognised based on the information provided by the criminal or victim. The detected face and details of the victim or offender are compared to those in our database. If the registration information matches, it will be mailed to the neighborhood police station.

4. SOFTWARE REQUIRED:

Python, Ganache, Anaconda, Spyder,

4.1 Python

Python is easy and safe, it is used for developing websites and software. It is task automation and it is used for analysis and data visualization.

Fig.4.1 Python

4.2 Ganache:

Ganache is personal blockchain for rapid Ethereum and Corda distributed application development you can use Ganache across the entire development cycle. In this project we stored criminal or victim data in blockchain.
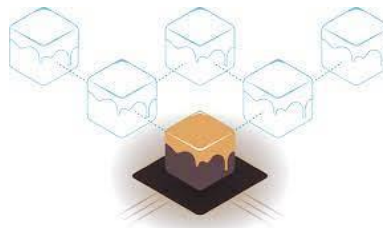

Fig.4.2 Ganache

4.3 Anaconda:

Anaconda is distribution of the Python and R programming languages for scientific computing, that aim to simplify package management and deployment. It brings many of the tools used in data science and machine learning with just one install.

Fig.4.3 Anaconda

4.4 Spyder:

Spyder is an open source course cross platform integrated development environment for scientific programming in the Python language.
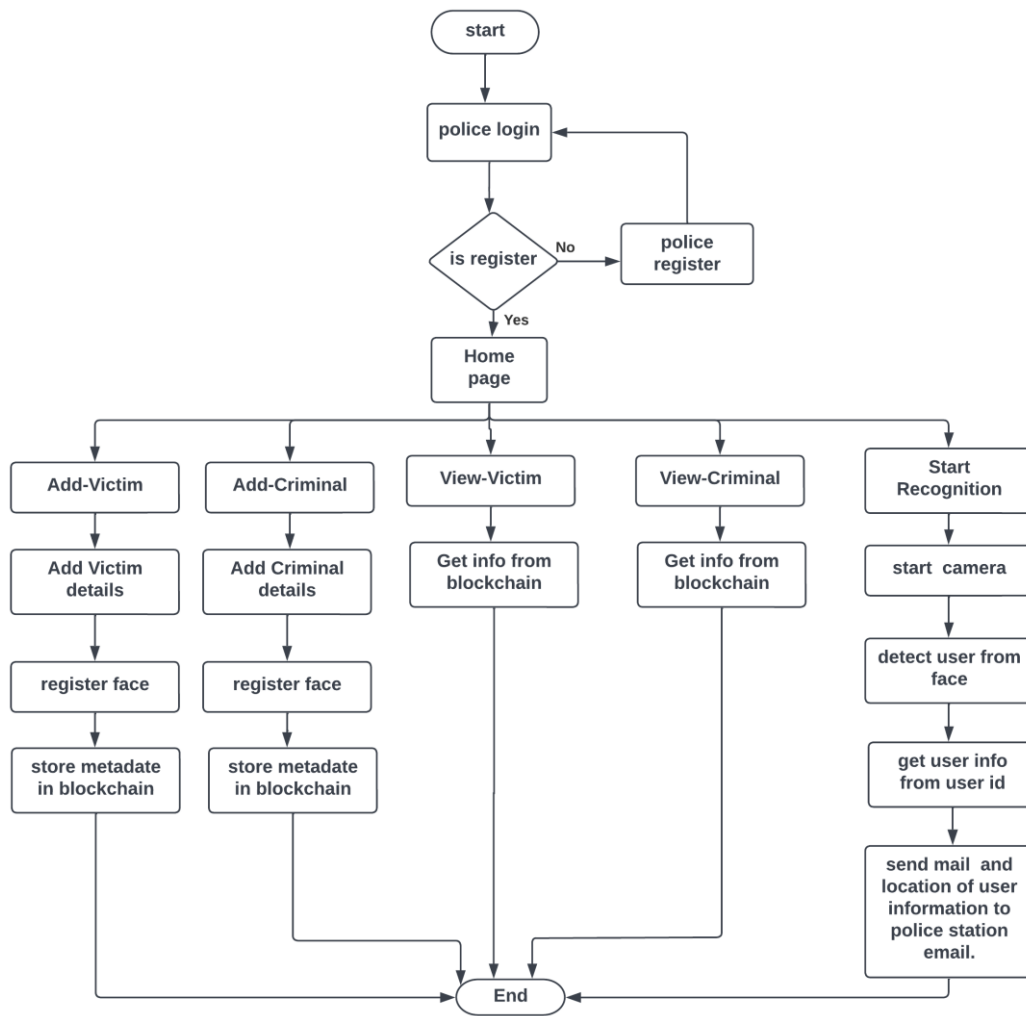

Fig.4.4 Spyder

5. PROJECT FLOW CHART

Fig.5 Flow chart of Proposed system

In this Proposed work a flow chart is shows the diagrammatic representation of an algorithm .

Algorithm:

1) Initialize and start all the software's required.
2) Police login I/p username and password.
3) Go to main page
    i. Add-victim details.
    ii. Add-criminal details.
    iii. View-victim details.
    iv. View-criminal details.
4) Start recognition, start camera, detect face, get info from stored details
5) Send the mail to police station (info, face, location).

6. EXPERIMENTAL RESULTS

The studies' findings demonstrated that this approach will offer practical means of identifying the victim of illegal activity.
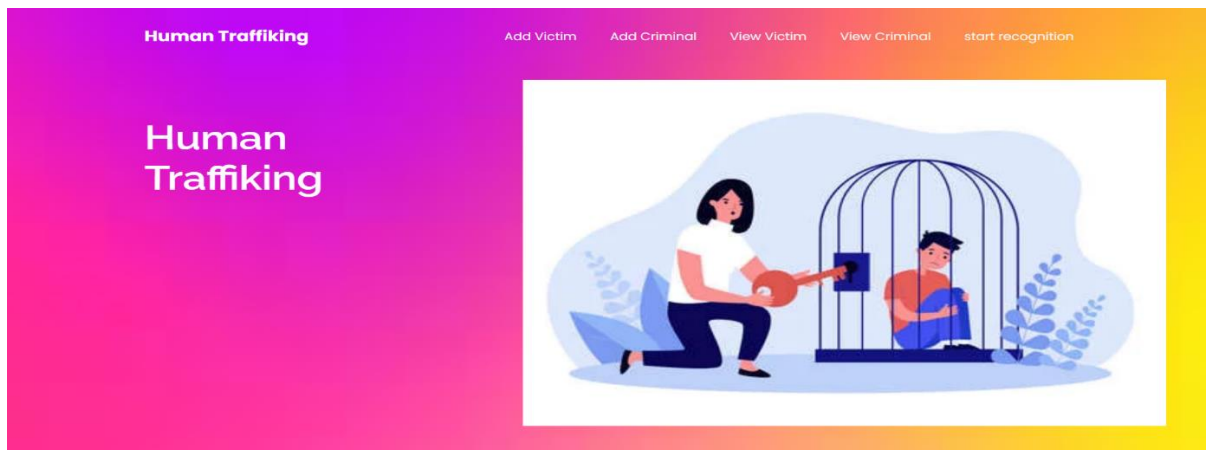
6.1 Login page:

Once the user name and password are entered, we are taken to the following page, which displays page 5.2 below.
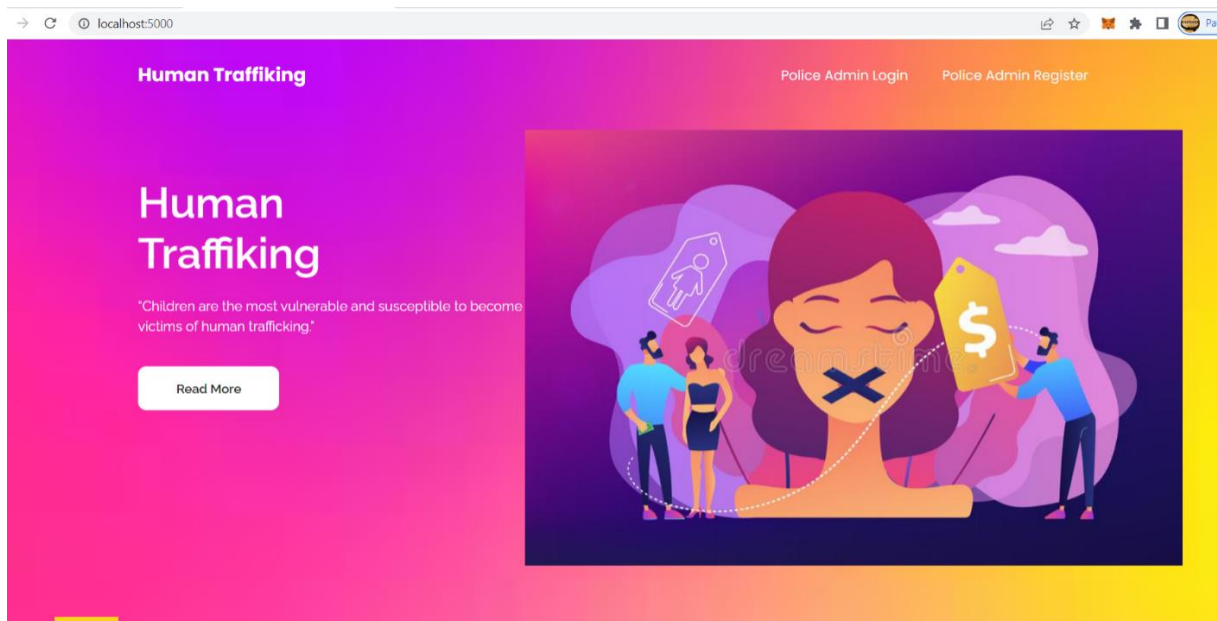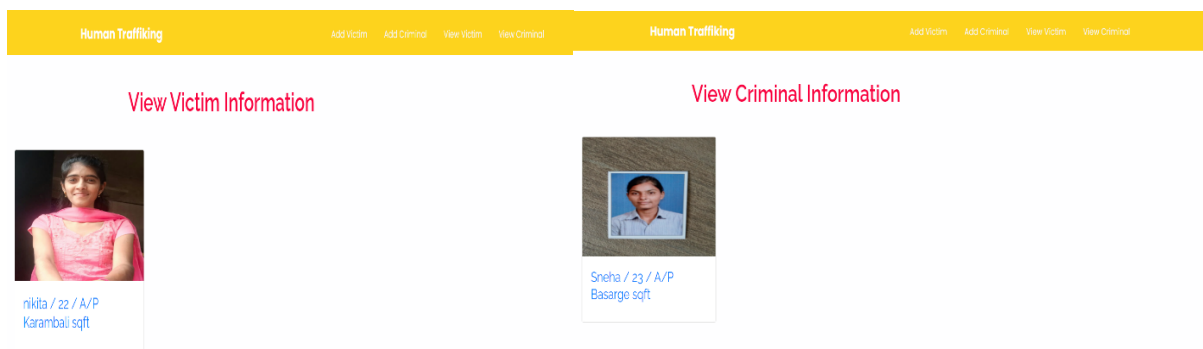

6.2 Add Victim or Criminal:

Using the add victim and add criminal login processes, we can add victim or criminal data. During this procedure, we add all relevant information.
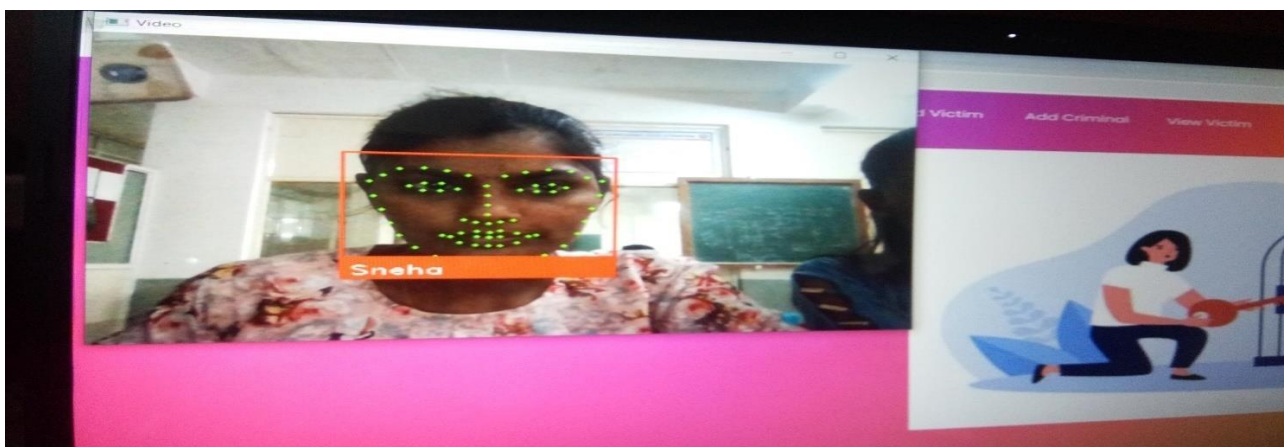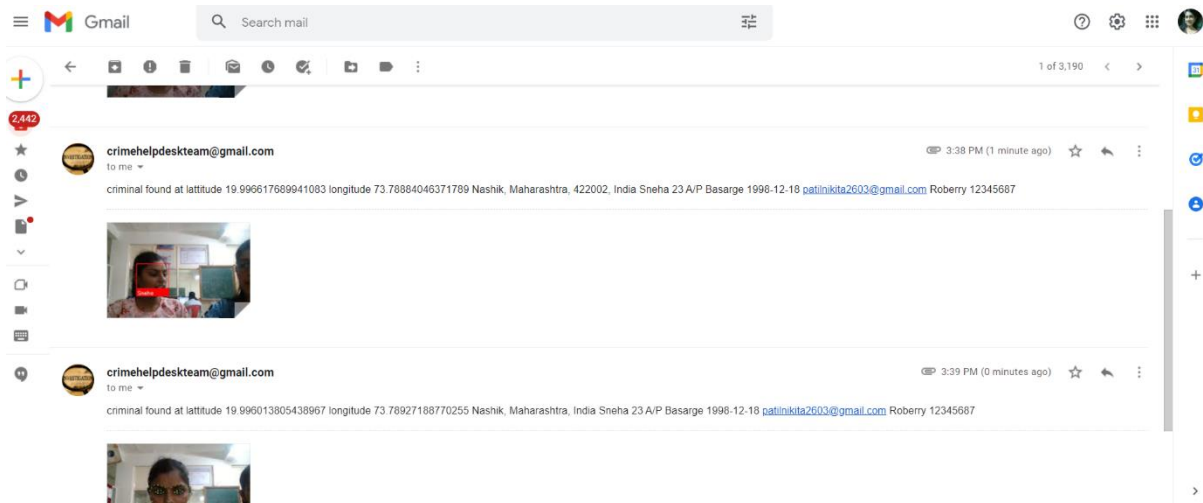
6.3 View Victim or View Criminal:

Added criminal And Victim data we can see in this page.

6.4 Start Recognition:

The perpetrator or victim's face will be recognized once we begin the recognition process. The criminal or victim will be recognized and detected if they are in our database. then it will be mailed with a GPS position to the closest police station..

7. CONCLUSION

Blockchain technology aids in crime investigation, particularly in cases of human trafficking. For criminal face recognition and tracking, the implemented manual face recognition and automatic awareness device is best. Quick criminal location notifications; a more successful search method for people who seem suspicious or are absent enhanced facial recognition scanning to find people who may be missing or criminal suspects. decreased human effort quicker detection of offenders. Video is always accessible. provides reliable surveillance

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