



Centralized Crime Data Base Using Block chain For Fast Investigation of Crime in Human Trafficking

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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 block chain 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.

IndexTerms - Python, Ganache, Anaconda, Spyder, Block chain

I. INTRODUCTION:

We used face recognition in the current work to identify the culprit 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].

II. LITERATURE SURVEY:

The implementation of any work cannot be started directly without studying previous related work carrying out by various authors. We used face recognition in the current work to identify the culprit 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.

2.1 FACE RECOGNITION AND DETECTION USING NEURAL NETWORKS

Authors: Vinita Bhandiwad and Bhanu Tekwani

Survey:

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. The neural network is created and trained with a training set of faces and non-faces. The neural network has an adaptive learning function, i. H. an ability to learn to perform tasks. You can also create your own organization. They have a remarkable ability to derive meaning from complicated or imprecise data. Restriction: The number of compartments must be increased in the training set.

2.2 FACE RECOGNITION USING NEURAL NETWORKS

Authors: y S. C. Debiyersild arid A. D Broadhurst

Survey:

An approach to the face recognition problem is presented using a Discrete Cosine Transform (DCT) and neural networks. DCT is used to extract features from high-dimensional facial data. Two different neural networks are used. The standard backpropagation neural network is used in a "network-per-person" implementation, while the backpropagation network is used in a database implementation. Two types of networks were used for data classification, a standard backpropagation network (for identifying the person) with impulse and a backpropagation network (for determining the database Membership). The database comprised 83 different motifs with ten views per motif (830 images). Using the standard impulse backpropagation algorithm (to determine identity), 83 networks were trained separately. A single network was trained using the forward network backpropagation algorithm (to determine database membership). No attempt was made to control the light filtered through the laboratory blinds. The neon lights went on and off randomly. Restriction: The system cannot be implemented with 500 or more subjects.

2.3 REAL TIME FACE DETECTION USING NEURAL NETWORKS

Authors: Angel Noe Martinez-Gonzalez and Victor Ayala-Ramirez

Survey:

It is an area of active interdisciplinary research using computer vision, image processing and pattern recognition techniques. On the other hand, neural networks have been widely used to address problems in feature extraction, pattern recognition, and generally the same type of problems. The system proposed here uses neural networks in developing a face recognition system that can operate in real time. The system performs a guided search for faces in regions of interest that exhibit human skin color characteristics. 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 color properties as the skin color model are difficult to identify, and the robustness of the system can be improved by using larger training sets.

III. RESEARCH METHODOLOGY

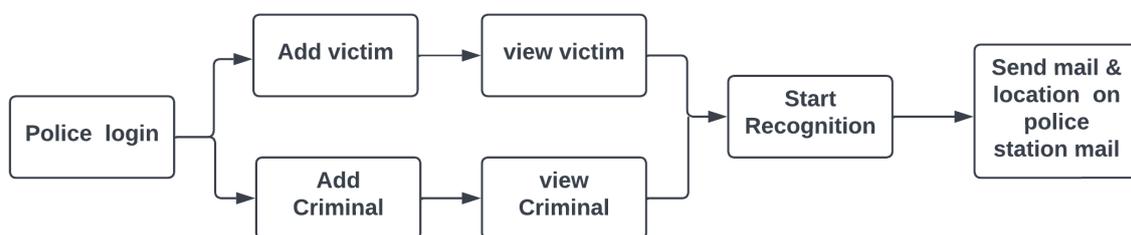


fig3. Proposed work methodology

Description of Proposed system:

The issue of prolonged criminal investigations in cases of human trafficking. We are utilizing block chain 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 recognized 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.

3.1. 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.3.1 python

3.2 Ganache:

Ganache is personal block chain 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 block chain.

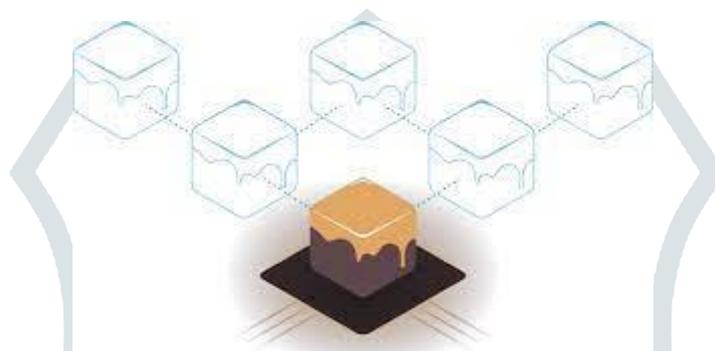


fig.3.2 ganache

3.3 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.

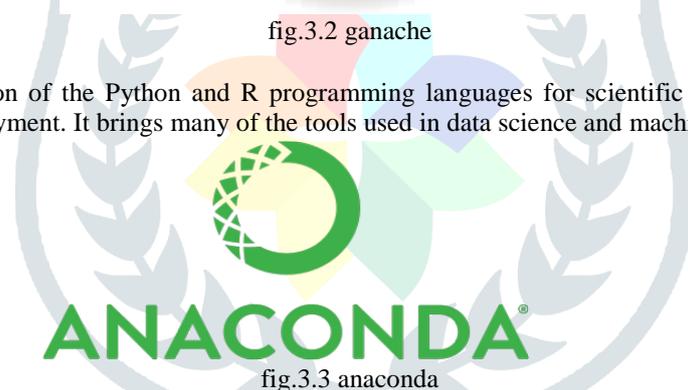


fig.3.3 anaconda

3.4 Spyder:

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



fig.3.4 spyder

IV. RESULTS AND DISCUSSION

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

4.1 Login page:

Once the user name and password are entered, we are taken to the following page, which displays page 4.2 below.

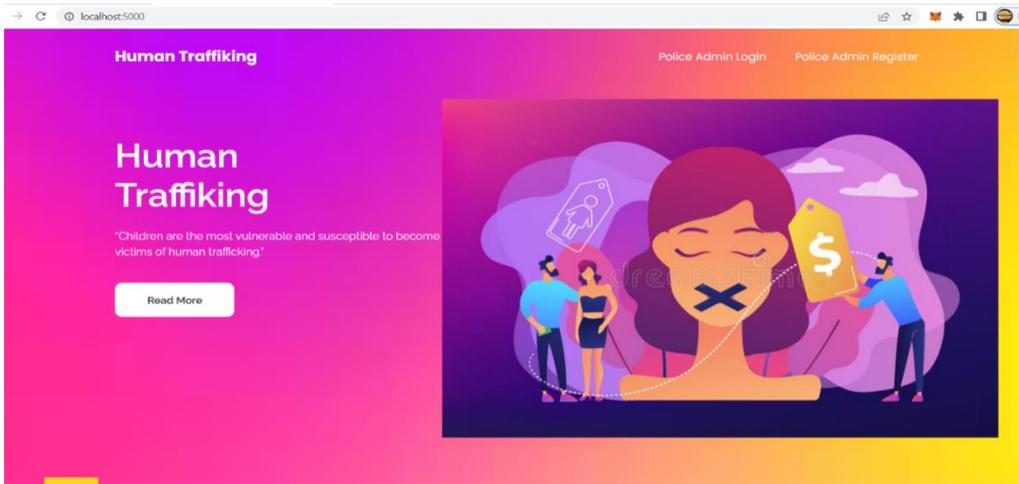


fig4.1. login page

4.2 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.

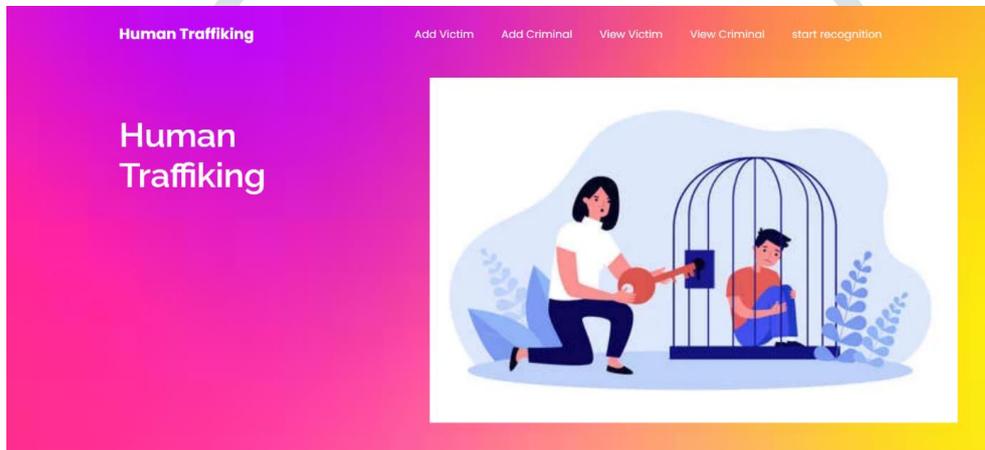


fig4.2 add victim or criminal

4.3 View Victim or View Criminal:

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

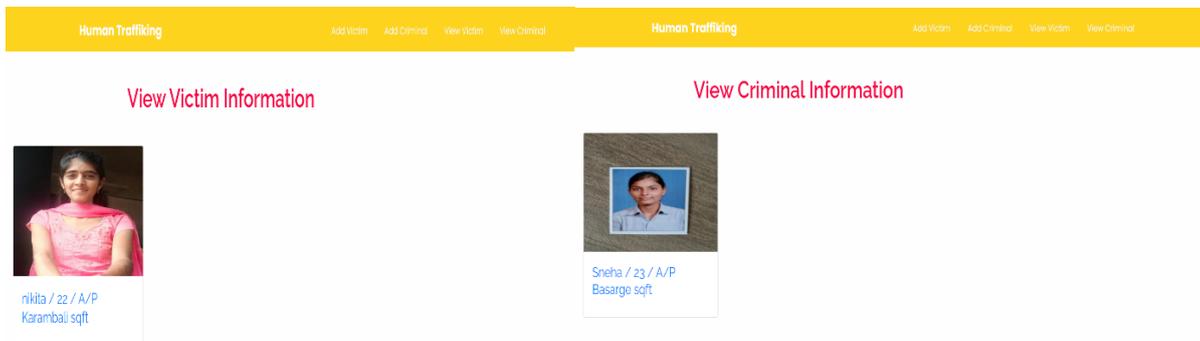


fig4.3 saved information

4.4 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.



fig4.4 recognized face

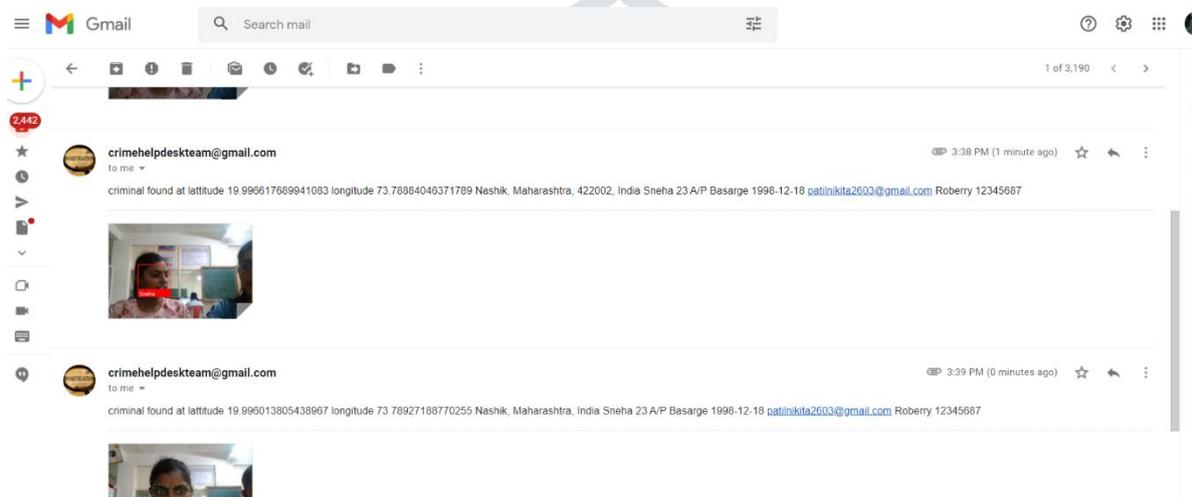


fig 4.5 recognized information send to the e-mail

V. ACKNOWLEDGMENT

I take this opportunity to gratefully acknowledge then inspiration, encouragement, guidance, help and valuable suggestions received from all my well-wishes. I would like to thank my Project guide Prof.G.B. Kalkambkar madam who has helped me and make available much useful information to complete this paper.

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