AI-ASSISTED SEARCH FOR MISSING PERSON

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ABSTRACT

The fact that half of the 174 children who go missing each day in India are still unaccounted for is incredibly troubling .According to a National Crime Records Bureau (NCRB) data, more than one lakhs children (1, 11,569 in all) were reported missing up until 2016, and 55,625 of them were still unaccounted for at the end of the year that was cited by the Ministry of Home Affairs (MHA) in Parliament (LS Q no. 3928, 20-03-2018). In order to tackle and help out Police, AI-Assisted Search for Missing Children a GUI application was created in Python that the police may use to open a new case and find missing children. The missing person's image that has been supplied is processed on the backend, and important information are recorded. This is kept in a database to get her with more detail like name, parent's name, age, place, etc. An application using Android is also developed which can be made accessible to the general public. Using this application, a person's photo can be uploaded if found suspicious by the user. There is an option of submitting the photo obliquely or an ominously .Along with the location, this image is saved in the database. The GUI application applies a machine learning algorithm to compare user-submitted photos with those uploaded by the police .Any matches along with the place where the missing individual was last seen if they are discovered can displayed.

INTRODUCTION

Every year, countless numbers of missing children are reported in India. It is really distressing to see those children and other people going missing is then or min times like these, when crime rates are at record highs. A society has to be creating such a way that, it has to be healthy and secure for the children. A system has to be developed to keep track and locate the missing children which will be helpful for anti-crime authorities. In order to locate missing children and victims of human trafficking, face recognition technology can be employed. Given the concerning figures, it's critical to have an accessible and easy-to-use method of finding the missing kids. With image, it will be easier to manager cord so missing people and children on a centralized database. It is simple to update or delete the records. It can be used to add, update, maintain, and remove records more quickly .This software will assist the police and the guardians swiftly in locating the missing children or person at anytime and anywhere.

LITERATURE SURVEY

Title:-“Deep Face Recognition”

Author: The author of the paper titled "Deep Face Recognition" is Omkar M. Parkhi, along with Andrea Vedaldi, Andrew Zisserman, and Karen Simonyan.

Abstract:-Face recognition is the task of identifying an individual from an image of their face and a database of know faces. Despite being a relatively easy task for most humans, “unconstrained” face recognition by machines, specifically in settings such as malls, casinos and transport terminals, remains an open and active area of research. However, in recent years, a large number of photos have been crawled by search engines, and uploaded to social networks, which include a variety of unconstrained material, such as objects, faces and scenes. This large volume of data and the increase in computational resources have enabled the use of more powerful statistical models for general challenge of image classification. This research project evaluates the use of big data dependent machine learning approaches such as deep convolution neural networks for image classification for the problem of un constrained facial recognition.

Title:-“Data-specific Adaptive Threshold for Face Recognition and Authentication” Author: “Data-Specific Adaptive Threshold for Face Recognition and Authentication “are H. A.Yegna narayana and S.M.Gaur.

Abstract:-Many face recognition systems boost the performance using deep learning models, but only a few researches go into the mechanisms for dealing with online registration .Although we can obtain discriminative facial features through the state-of-the-art deep model training, how to decide the best threshold for practical use remains a challenge. We develop a technique of adaptive threshold mechanism to improve the recognition accuracy. We also design a face recognition system along with the registering procedure to handle online registration. Furthermore, we introduce an evaluation protocol to better evaluate the performance of an algorithm for real-world scenarios. Under our proposed protocol, our method can achieve a 22% accuracy improvement on the LFW dataset.

Title:-“Sphere Face: Deep Hyper sphere embedding for Face Recognition

Author:"Sphere Face: Deep Hyper sphere Embedding for Face Recognition " are WeiyangLiu, Yandong Wen, ZhidingYu, Ming Li, Bhiksha Raj, and Le Song

Abstract:-This paper addresses deep face recognition (FR) problem under open- set protocol, where ideal face features are expected to have smaller maximal intra-class distance than minimal inter-class distance

under a suitably chosen metric space. However, few existing algorithms can effectively achieve this criterion. To this end, we propose the angular soft max (A-Soft max) loss that enables convolution neural networks (CNNs) to learn angularly discriminative features. Geometrically, A-Soft max loss can be viewed as imposing discriminative constraints on a hyper sphere manifold, which intrinsically matches the prior that faces also a manifold. Moreover, the size of angular margin can be quantitatively adjusted by a parameter. We further derive specific to approximate the ideal feature criterion. Extensive analysis and experiments on Labeled Face in the Wild (LFW), YouTube Faces (YTF) and Mega Face Challenge show the superiority of A- Soft max loss in FR tasks. The code has also been made publicly available.

Title:-"Deep Feature Interpolation for Image Content Changes",

Author: "Deep Feature Interpolation for Image Content Changes" are Ira Kemelmacher- Shlizerman, Eli Shechtman, Rahul Garg, and Steven M. Seitz.

Abstract:-We propose Deep Feature Interpolation (DFI), a new data-driven baseline for auto match high-resolution image transformation .As the name suggests, it relies only on simple linear interpolation of deep convolution features from pre-trained convents. We show that despite its simplicity, DFI can perform high-level semantic transformations like "make older/younger", "make bespectacled", "add smile", among others, surprisingly well – sometimes even matching or outperforming the state-of-the-art. This is particularly unexpected as DFI requires no specialized network architecture or even any deep network to be trained for these tasks. DFI therefore can be used as an base line to evaluate more complex algorithms and provides a practical answer to the question of which image transformation tasks are still challenging in the rise of deep learning.

SYSTEM ANALYSIS

EXISTING SYSTEM

In many regions, the process of searching for missing persons primarily relies on manual efforts, involving the coordination of law enforcement agencies, volunteers, and community members. Traditional methods include door-to-door inquiries, distribution of flyers, media broadcasts, and the use of databases containing information about missing individuals. These methods can be time-consuming and may lack the efficiency needed for quick and effective searches. Additionally, they often depend on the availability and coordination of large numbers of people and resources, which can be challenging to organize and sustain over extended periods.

PROPOSED SYSTEM

A. Classification Algorithm

An example of supervised learning is the classification algorithm which classifies fresh findings derived from training data. A program that does classification divides fresh observations into various classes or groups after learning from the provided dataset or observations. For example, lion or tiger, yes or no, 0 or1, spam or not spam, etc .Targets, labels, or categories can be used to describe classes in all cases. In contrast to regression, classification's output variable is a category rather than a value, such as "Green or Blue," "fruit or animal," etc. The Classification algorithm uses labeled input data because it is a supervised learning technique, therefore it comprises input and output information.

B. KNN Algorithm

K-Nearest Neighbor is the most basic supervised learning based machine learning algorithms. This algorithm places the new case in the category that matches the existing categories the most by assuming a correlation between the new instance and the data and previous cases. In order to classify a new data point based on similarity, it stores all of the existing data. This shows that the K-NN method can quickly and accurately classify new data. Although it can be used for both classification and regression, classification issues receive the majority of its employment.

C. Pyqt5andPostgreSQL

A toolkit for GUI widgets is PyQt. It is a Python interface for the robust and well-liked cross-platform GUI library Qt. The PyQt API is made up of various modules that contain a wide range of classes and functions. The free ware PyQt is a plug-in for Python that implements the cross-platform GUI toolkit Qt. Both SQL (relational) and JSON (non- relational) querying are supported by Postgre SQL, a powerful, enterprise-class open source relational database. The database system is very reliable. For many web, mobile

IMPLEMENTATION AND RESULTS

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it

provides security and ease of use with retaining the privacy. Input Design considered the following things:

OBJECTIVES

1. Input Design is the process of converting a user-oriented description of the input into a computer-based system .This design is important to avoid errors in the data input process and show the correct direction to the management for getting correct information from the computerized system.

2. It is achieved by creating user-friendly screens for the data entry to handle large volume of data. The goal of designing input is to make data entry easier and to be free from errors. The data entry screen is designed in such a way that all the data manipulates can be performed. It also provides record viewing facilities.

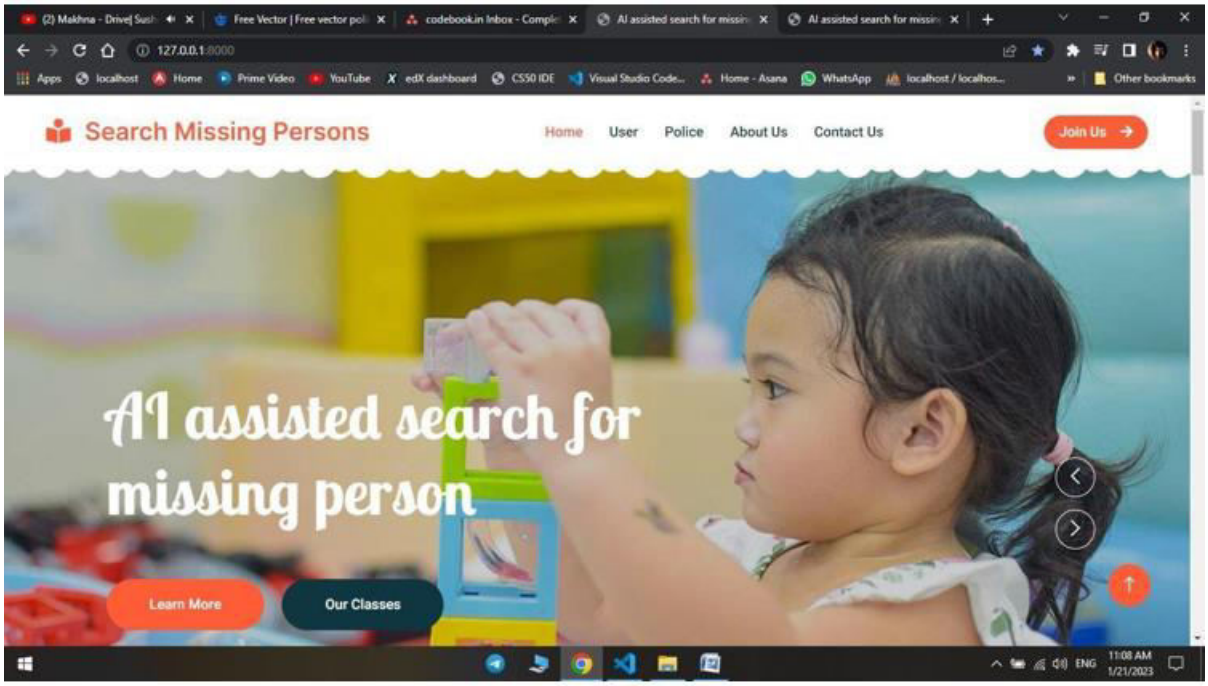
OUTPUT DESIGN

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any system results of processing are communicated to the users and to other system through outputs. In output design it is determined how the information is to be displaced for immediate need a so the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user decision-making.

1. Designing computer output should proceed in an organized, well thought out manner; the right output must be developed while ensuring that each output element is designed so that people will find the system can use easily and effectively. When analysis design computer output, they should Identify the specific output that is needed to meet the requirements.

2. Select methods for presenting information.

3. Create document, report ,or other formats that contain information produced by the system.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Learn More
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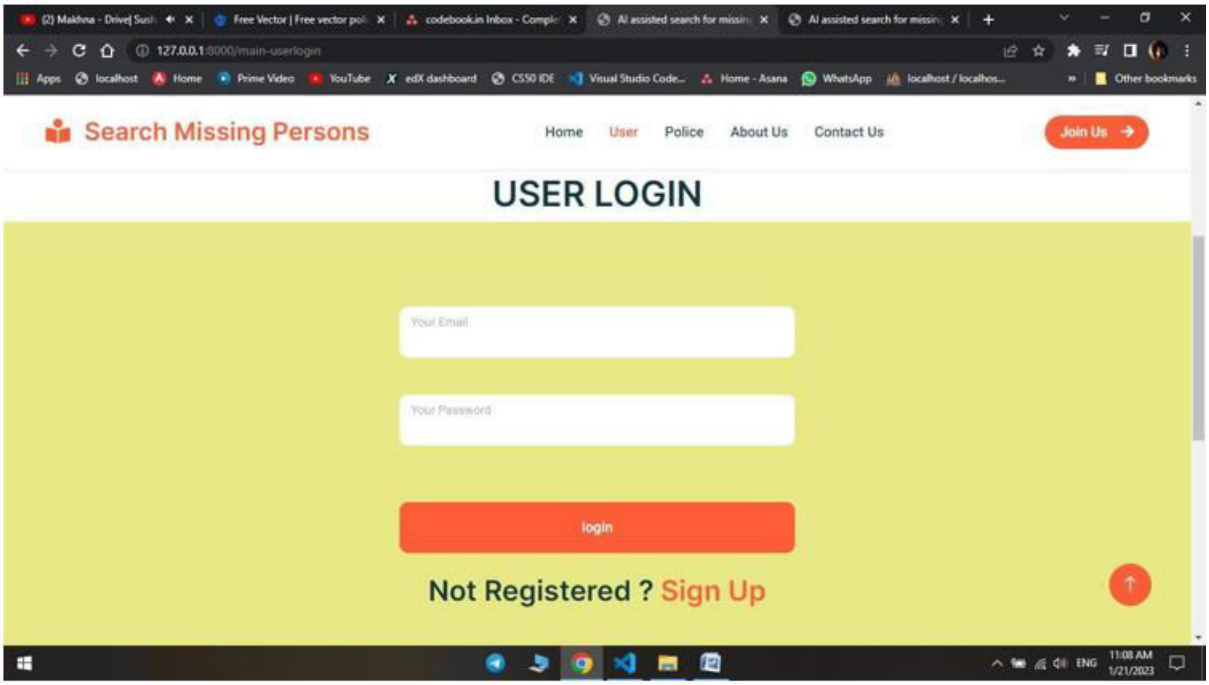
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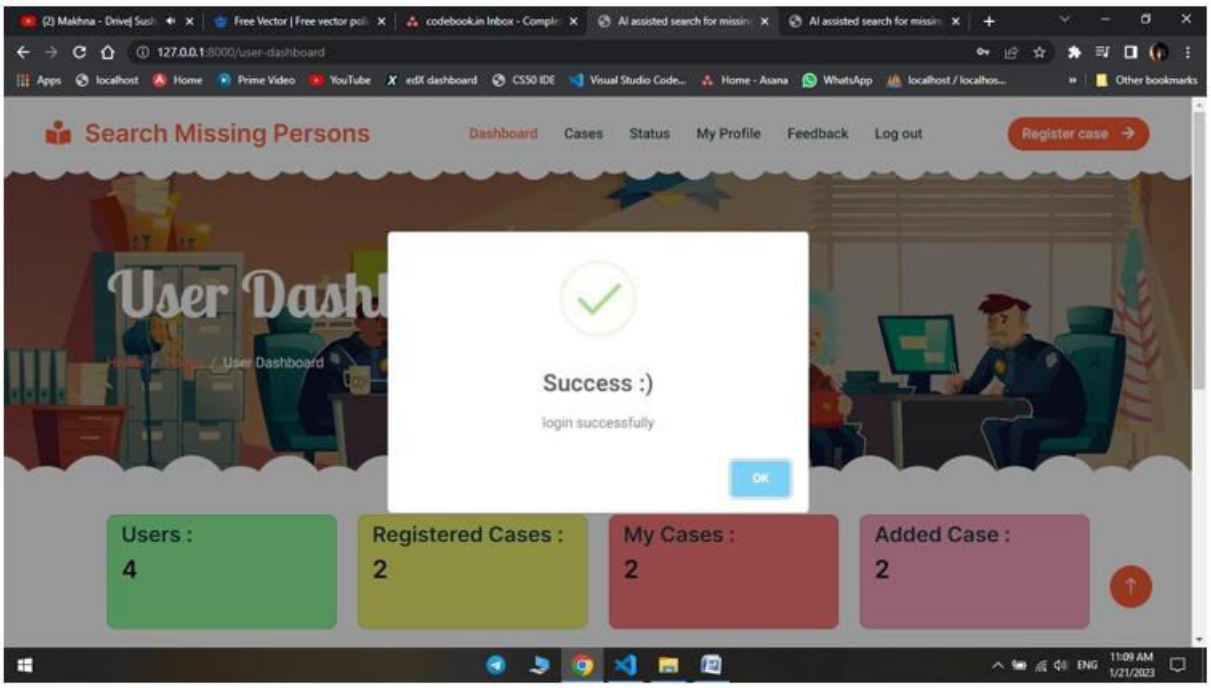
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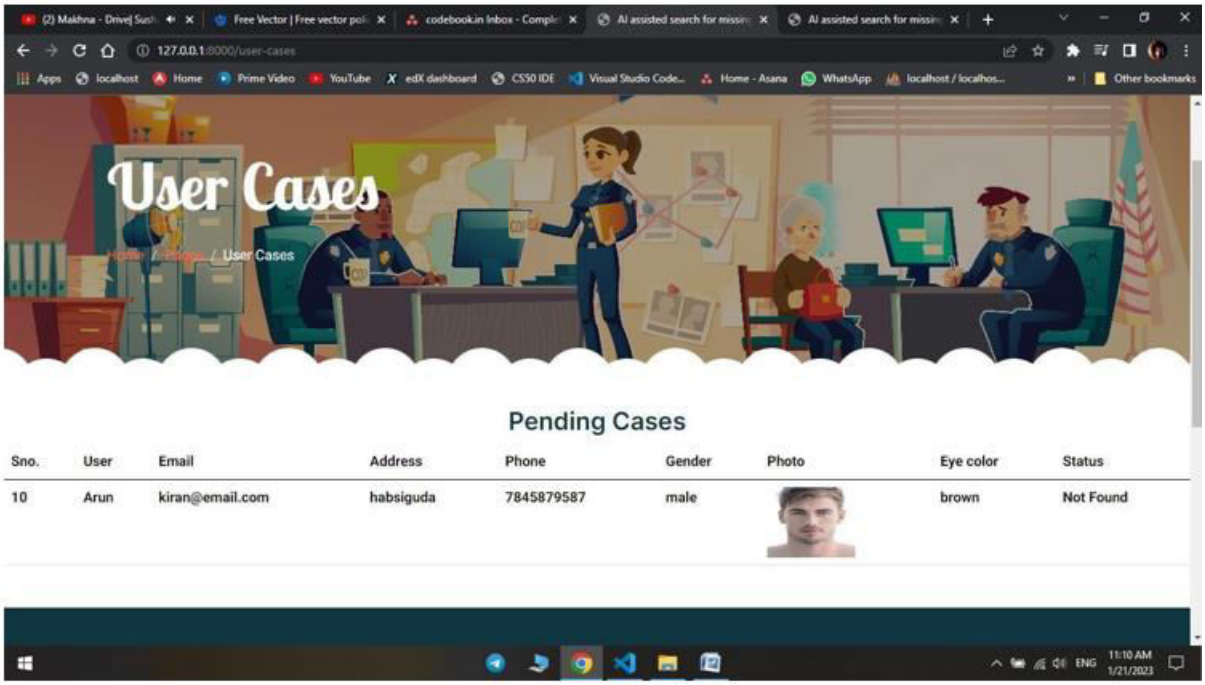
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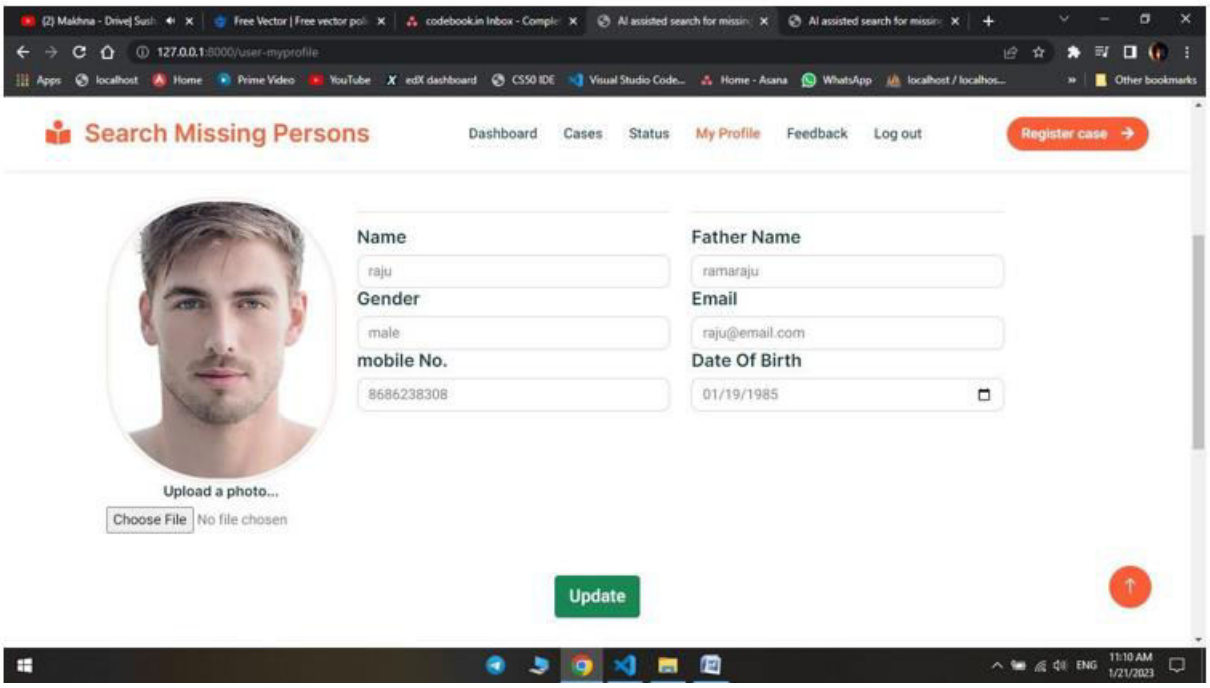

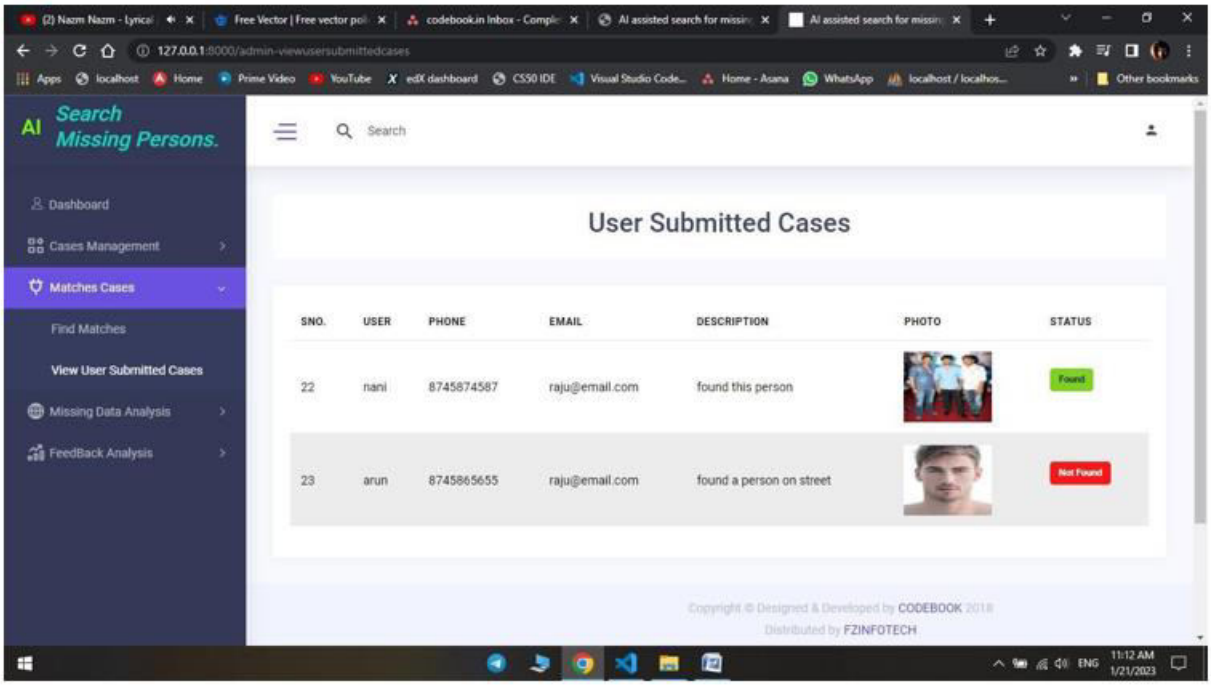

CONCLUSION

This system is a functioning illustration of an AI-Assisted Search for Missing Children intended to locate missing children. It has several face variety of useful capabilities, a sit's explored in this paper .The primary goal was to make it easier to find and report missing children, which is successful. When used wisely, this technology can be quite beneficial .Even in hotels, hospitals, and other public places, it may

be utilized to quickly locate offenders. This application can be greatly enhanced by utilizing Flask to develop APIs .A fully functional web application can also be created that uses Tensor flow.

FUTURE SCOPE

The future scope for AI-assisted search for missing persons holds promising potential for transforming how these critical situations are managed. Advancements in AI technologies, such as more sophisticated deep learning algorithms and enhanced computer vision capabilities, can significantly improve the accuracy and efficiency of searches. Integrating AI with real-time data sources, such as social media feeds and surveillance camera networks, could enable quicker identification and tracking of missing individuals. Additionally, the development of more robust and ethical data management practices will address privacy concerns and enhance the trustworthiness of AI systems. Future research could focus on improving AI's ability to handle diverse and complex data, reducing biases, and creating more intuitive interfaces for users. Collaboration with law enforcement and community organizations will be essential in developing AI systems that are not only technologically advanced but also practical and effective in real- world scenarios. Overall, the continued evolution of AI has the potential to greatly enhance the speed, precision, and effectiveness of missing person searches, ultimately leading to faster resolutions and safer outcomes.

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