



INVESTIGATION USING AI

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Abstract : Globally, countless numbers of people are missing every day including children, adolescents, the mentally challenged, adults with Alzheimer's, and so on. Most of them have not been tracked. This paper proposes a program that can help police and the public by speeding up the search process using face recognition. If a person is missing, people related to that person or the police can upload a photo of that person which will be stored in a database. If the public meets a suspicious person, you can photograph and upload a photo of that person on our site. The face recognition model in our system will try to find the same on the website with the help of face code text. It is done by comparing the face text of the uploaded image with the face text of the image on the website. If a match is found, you will be notified by the police and the people related to that person and the place where that person is found. The facial recognition model we have used maintains 99.38% accuracy on the Face Unveiled Wild Benchmark covering 13,000 images. The most troubling fact about the missing Indian children is that although on average 174 children go missing every day, half of them are not traced. A report by the National Crime Records Bureau (NCRB) quoted by the Department of Home Affairs (MHA) in Parliament (LS Q no. 3928, 20-03-2018), more than one lakh children (1,11,569 in real numbers) were reported missing until 2016, of which 55,625 remained unavailable until the end of the year.

Statistics, however, are an indication of the lack of a national repository for Missing Children. "There are no funds set aside to trace the missing persons," said an official source.

Index Terms—KNN, AI, Algorithms, Facial Recognition, Investigation

1 INTRODUCTION

The missing person may be identified as either a child or an adult - lost, voluntarily or unwillingly. There are various categories of missing cases in which only 43 percent of the missing cases are known, 99% of children's airports, 2500 cases due to family problems and about 500 cases kid-napped by strangers (including both teenagers and adults). Women add up to 52% of lost cases and men add 48%. "In India, there is no budget set aside to find missing people," said an official source. The missing person faces many challenges, with few facing death (murder), rape or torture. People affected by the missing person such as parents, friends, relatives and caregivers face stress and anxiety because they do not know if the missing person is alive or dead. In our system, a picture of a person given to a caregiver at a lost time is stored on a website. The public is authorized to upload photos of any person in an uncertain situation.

1.1 Overview

To overcome traditional methods and problems arising from it. Following technology/system is proposed.

- Develop three applications.(Android and Desktop)
- Android application will be used by civilians/General public.
- Desktop application will be used by Government authorities like police/field working officers.
- Another desktop applications used by Technical teams for the purpose of executing different operations on collected data.
- Integration of Maps for ease of tracking.

1.2 What is happening here?

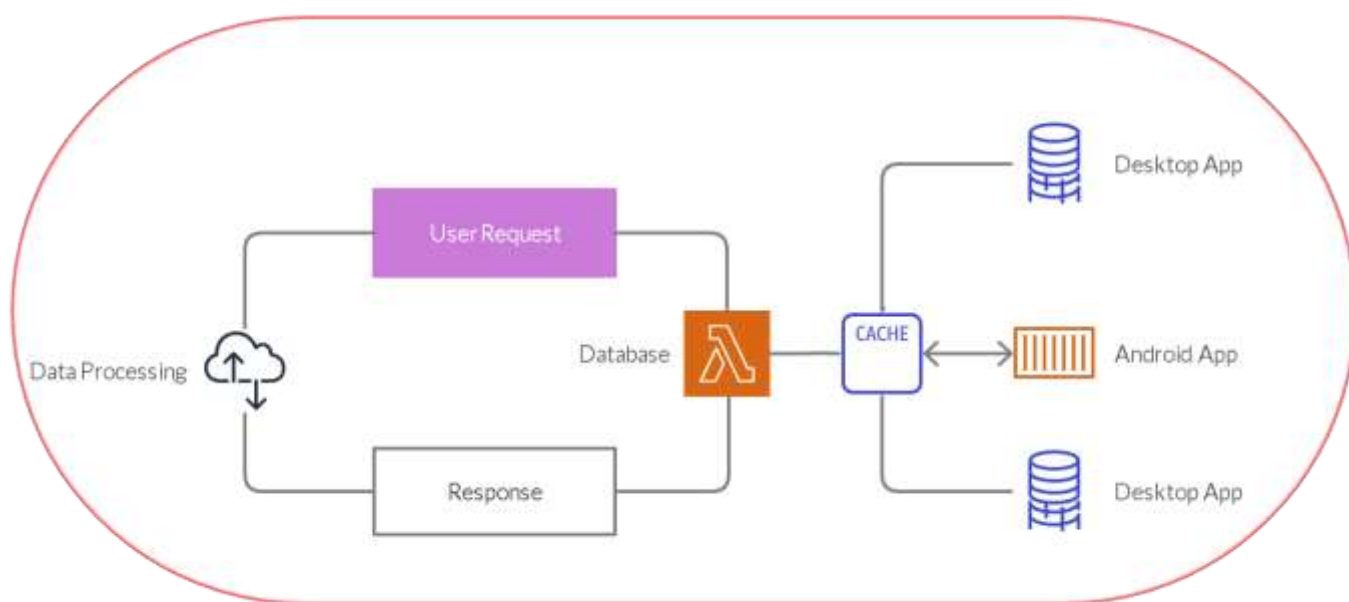


Fig. 1. System Architecture

We get the key points of the human face, the dlib generator of the facial mark produces 68 different facial points. Uses one short shot reading method.

These floating-point values are approximately 8 digits after decimal. It is something like this -

- Upload new data - whenever a new case requires registration. This button will be used. It will open a new GUI that will capture user data.
- Update Classifier - downloads facial data from the fire- base and trains the KNN class using those points.
- Match - downloads all user-registered points and predicts value using the KNN-trained section. If confidence is more than 60% we mean a game.
- Verified requests - all complaints that have been processed will be stored here.
- Map - Integrating received data into map for ease of tracking.

2 PROPOSED SYSTEM

2.2.1 Face matching algorithm

Assume that the desktop application has registered 3 cases, which means that dlib will generate $(136 * 3)$ landmarks. 136 because x and y link will be made in each area and there are 68 points and 3 is the number of cases. We will then train the KNN section on these points.

Imagine KNN distributing landmarks of facial features as in the building below where RED fits in person 1, GREEN in Person 2 and BLUE in Person

Now, to match any person's face we will simply produce that person's facial features and try to predict confidence using the KNN section we trained above. If confidence is more than 60% we will say it is the same person.

2.3 TOOLS AND TECHNOLOGIES

2.3.1 MODULES

- Login /Authentication
- Applications
- Cases

2.3.2 SOFTWARES

- Visual Studios
- Python
- PYQT Builder

2.3.3 TECHNOLOGIES

- Facial Recognition
- Machine Learning
- Cloud Computing
- Maps



3 BENEFITS

- Cost Effective
- Time Saving
- Highly Efficient
- Scalable
- Real Time Collaboration

4 LIMITATIONS

If age difference is too much between two images model fails.

5 CONCLUSION

Image recognition through the use of single image reading has become very powerful. These technologies, when used properly, can be of great help. It can also be used in hotels, hospitals, etc. to find criminals in an instant. You can improve this project on a large scale by integrating maps and location tracers.

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