



SMART INDIA HACKATHON 2022

Basic Details of the Team and Problem Statement

Organization : Cyber Crime Unit, Special Cell, Delhi Police, MHA

PS Code : RV1252

Problem Statement Title : "Develop a Mobile App through which a citizen can check whether an unattended child is a missing child from 'Track the missing child' database of WCD Ministry using Facial Recognition Software of Delhi Police"

Team Name : TEAM-FINDX

Team Leader Name : Chelsi Jain

Institute Code (AISHE) : C-61436

Institute Name : College of Technology and Engineering, Udaipur

Theme Name : Blockchain & Cybersecurity

Idea/Approach Details

❏ Idea

→ “Reverse Image Search based Tracking App with efficient Flex-Search Algorithm on WCD Lost-Child Data”

Flex-Search-Algorithm:

- **Data-Point:** [Missing_ID, Profile_No] Can regenerate all info about person.
- **Checkpoint-Database:** Preserves Data Points with respective Feature-Encoding from Last Search.
- **Data-pipeline** that retrieves new Data Points / Encoding and update Database Checkpoint on New Search.
- Filter Top-10 Image with Query-Image Based on **KNN-Clustering** with **Face-encodings (128 Features)**.
- **Face Recognition** on Top-10 Images with Face-encoding.
- **Extracts Info** of Best Match Data-Point.

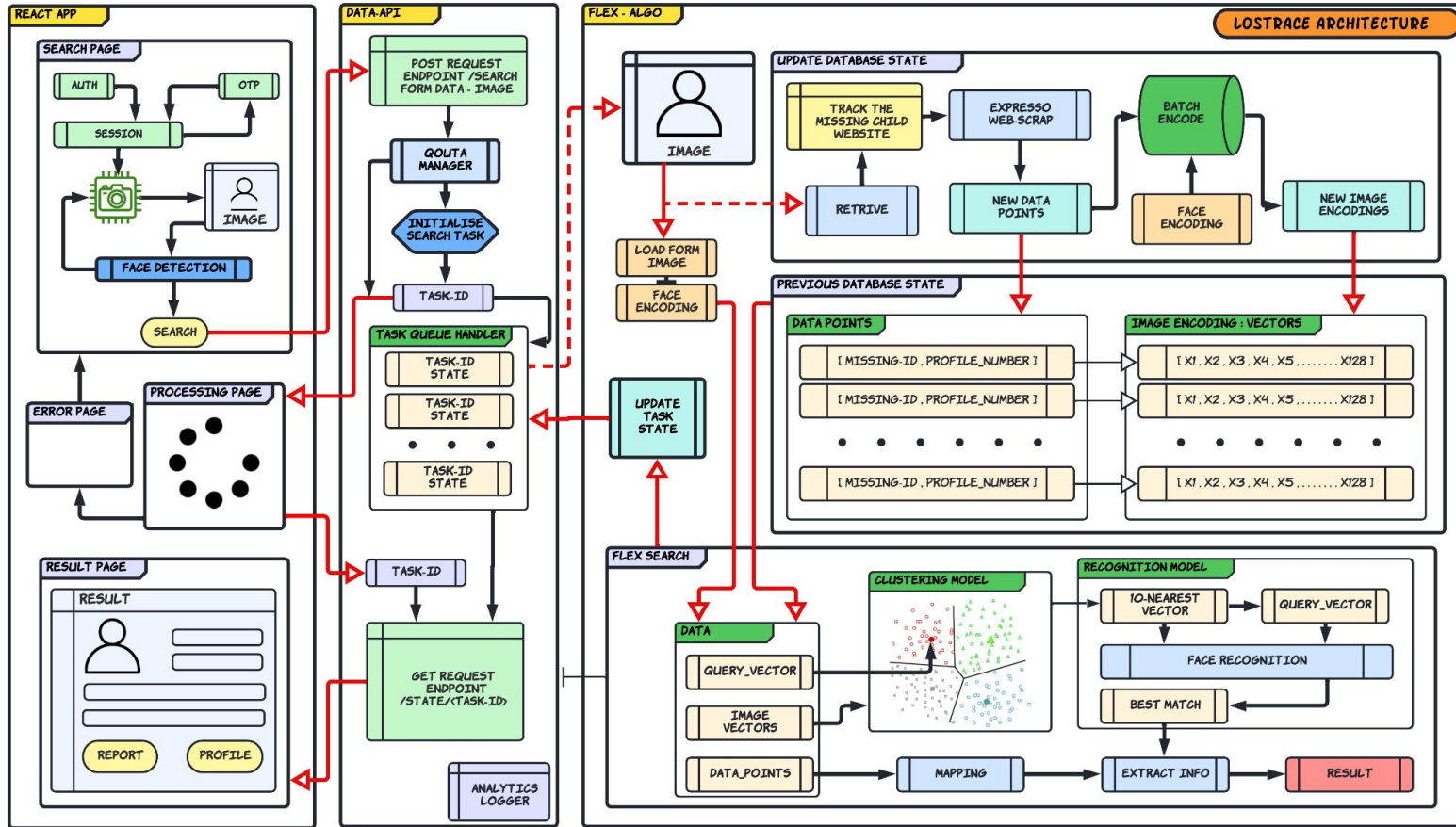
❏ Use-Cases

- App through which a citizen can check whether an unattended child is a **missing child** just from **Child's Image**.

❏ Show-Stopper

- **Highly Efficient Computation time**
Checkpoint Database omits repetitive Encoding & Clustering reduces Search Span, saving Computation Time & Resources.
- **REST-API**
Flexible API integration with Web, App, Surveillance-Cameras, etc.
- **Handles-Load Easily**
With OTP-Auth & Pre Face-Detection along with quota of 1000 Searches per Hour & Task-queue Manager.
- **Minimalistic UI**
Responsive Single Click Search-Mechanism

Idea/Approach Details



Tech-Stack

Backend

- Python
- Flask
- Sklearn
- Tensorflow

Frontend

- React
- Javascript
- TailwindCSS
- PostCSS

Database

- MongoDB

Deployment

- Heroku

Team Member Details

Team Leader Name:

Chelsi Jain

Branch : B.Tech.

Stream : CSE

Year : III

Team Member 1 Name:

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Branch : B.Tech.

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Team Member 5 Name:

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