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.
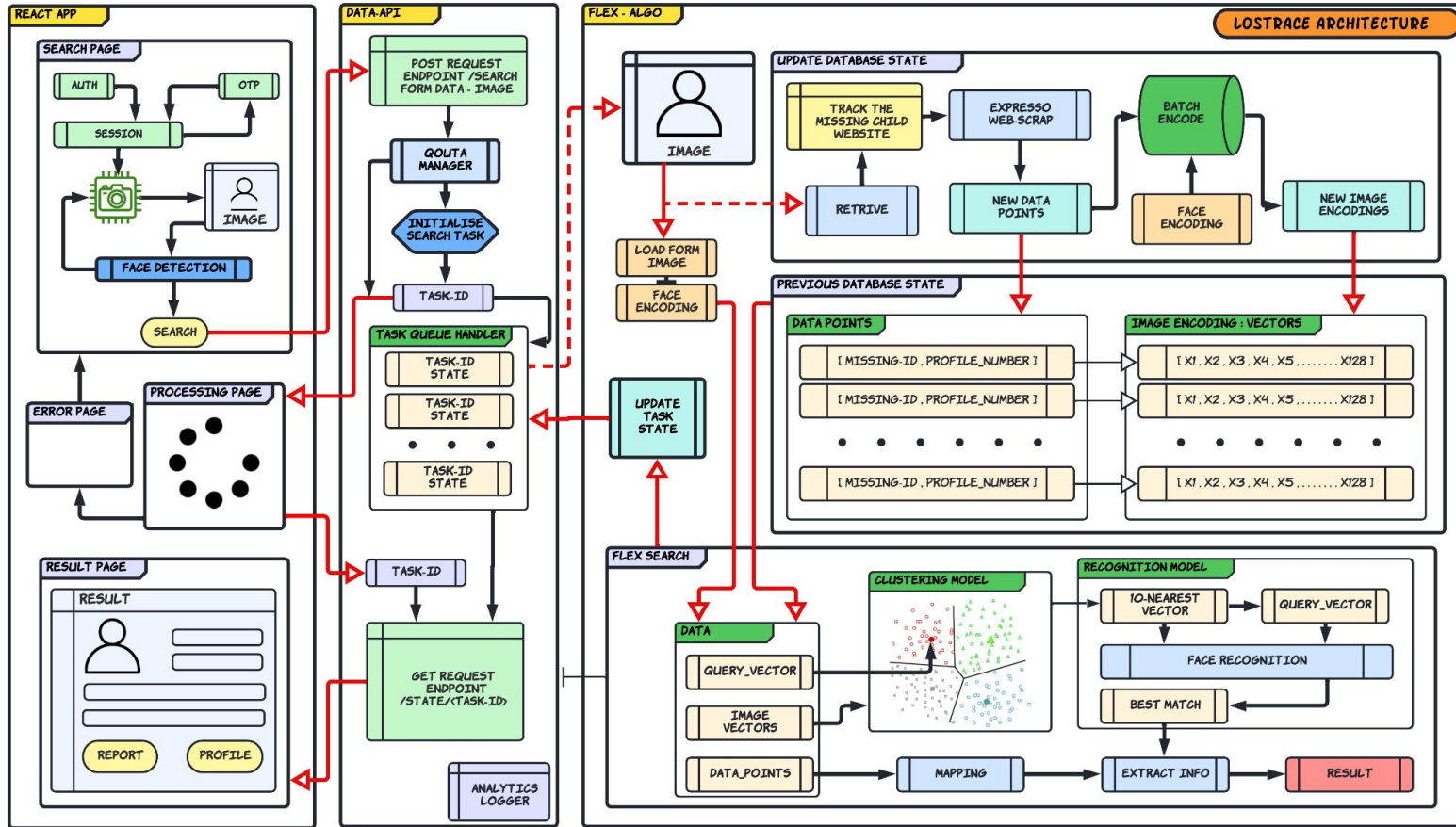- **Extracts Info** of Best Match Data-Point.

❏ 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-Loads 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

Team Member Details

Team Leader Name: Chelsi Jain

Branch : B.Tech.   Stream : CSE   Year : III

Team Member 1 Name: Garvit Chouhan

Branch : B.Tech.   Stream : CSE   Year : II

Team Member 2 Name: Subin S K

Branch : B.Tech.   Stream : CSE   Year : II

Team Member 3 Name: Kaustub Dutt Pandey

Branch : B.Tech.   Stream : CSE   Year : II

Team Member 4 Name: Prateek Garg

Branch : B.Tech.   Stream : CSE   Year : I

Team Member 5 Name: Ashmita Pandey

Branch : B.Tech.   Stream : ECE   Year : I