Basic Details of the Team and Problem Statement

PSID: KVH-005

Problem Statement Title: Advanced ANPR and FRS Solution

Team Name: 404! Group Name Does Not Exist

Team Leader Name: Arsh Khan
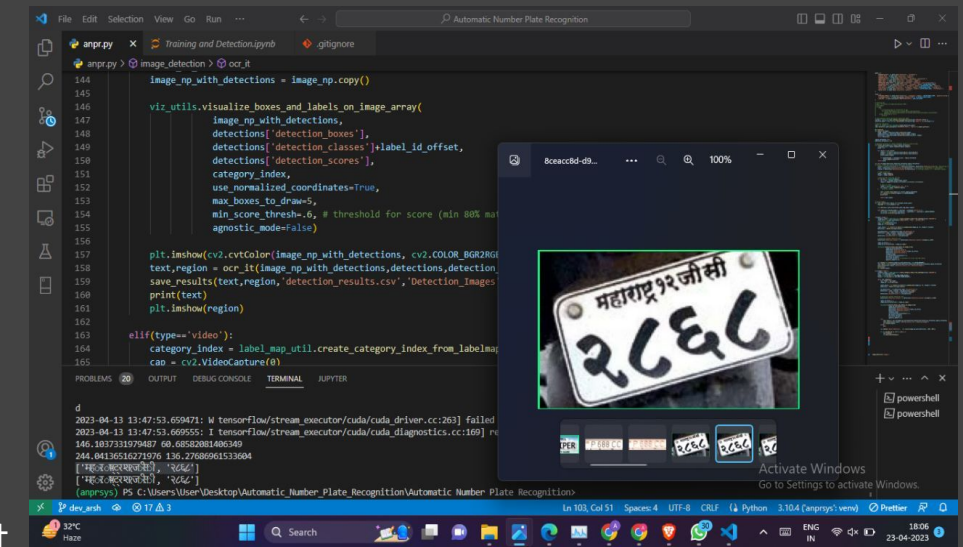
Institute Code (AISHE): C-33641

Institute Name: Veermata Jijabai Technological Institute (VJTI) Mumbai 400019

ANPR Tech. - static & moving number plates along with detection of vernacular number plates.

Usecases:

Automatic Toll Collection
Automated speeding Ticket Generator
Smart Parking
Criminal Surveillance

➔ Number Plate detection using TensorFlow Object detection model.
➔ It uses deep learning CNN (Convolutional Neural Network) model to detect/recognize licence plates of vehicles from CCTV Feeds.
➔ It also uses Optical Character Recognition (OCR) systems to extract text from licence plates.
➔ It uses an Google OCR API or Microsoft Vision OCR API for effective extraction of text from images and also enable us to recognize number plates that are written in typical non-standard ways using varying font styles, sizes, designs, symbols, languages etc.

Face Recognition Solution

Front End
➔ A user-friendly interface which displays the details of the car.
➔ A live CCTV feed is used as an input.
➔ All the attributes are displayed and by thorough training, the person can be detected and labelled as per the crime committed.

Backend
➔ Facial Recognition using Haar Cascade and Yolo algorithms
➔ Attributes of the detected Face is displayed
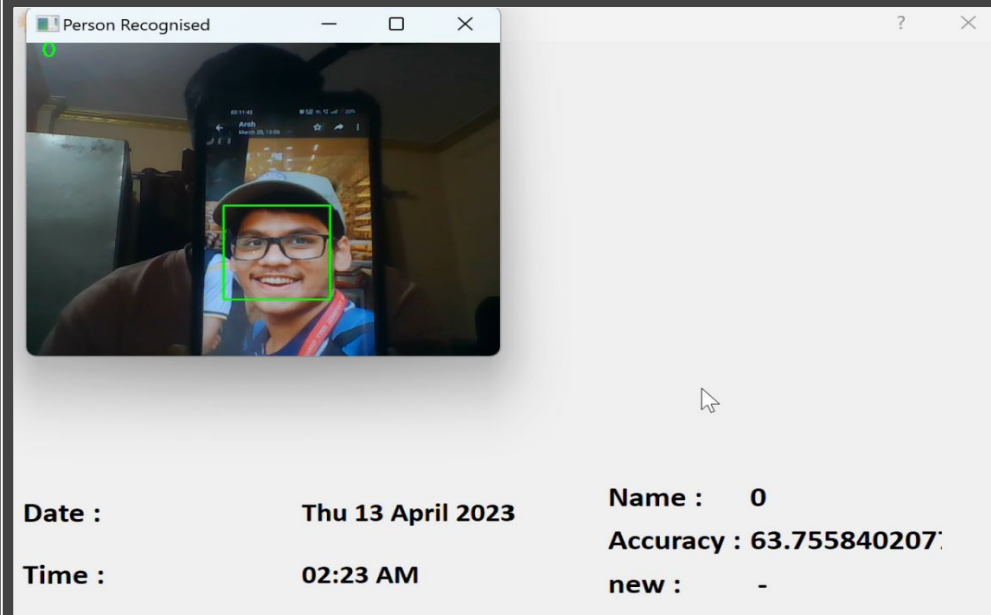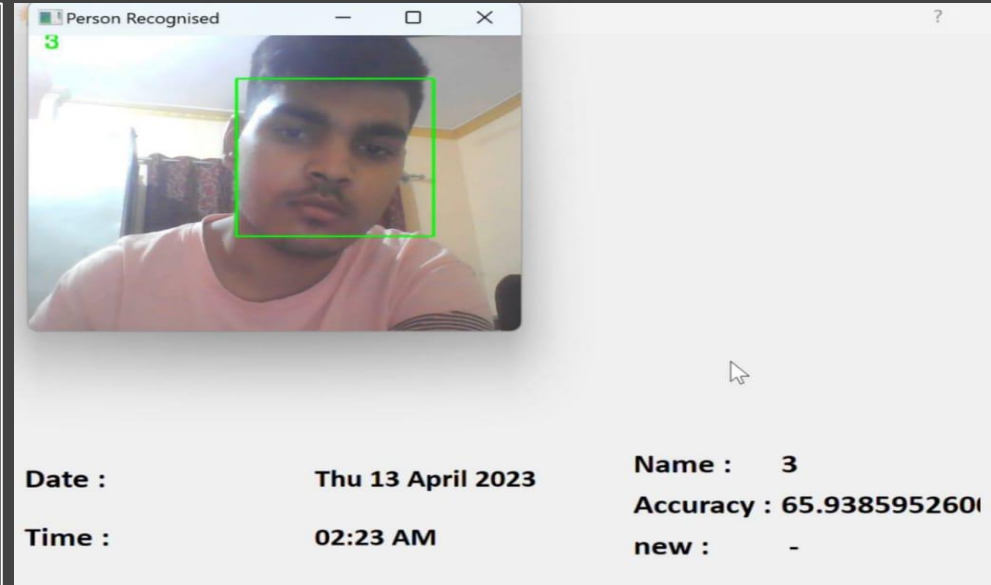➔ As a future aspect we can implement the storage of new faces as well.

Tech Stack:
➔ Languages:
        Python
➔ Modules/Libraries Used:
   ➔ OpenCV
   ➔ EasyOCR
   ➔ NumPy
   ➔ ImUtils
   ➔ PyQt5
   ➔ TensorFlow

Team Details (Github)

Sr. No.	Name of Team Member	Branch	Stream (ECE, CSE etc):	Year	Position in team
1	Arsh khan	Btech	E&TC	2nd	Team Leader
2	Komal Sambhus	Btech	E&TC	2nd	Backend Lead
3	Himanshu Singh	Btech	E&TC	2nd	Frontend Lead
4	Rushi Jani	Btech	E&TC	2nd	Frontend Coordinator
5	Siddharth Shenoy	Btech	E&TC	2nd	Frontend Coordinator
6	Aryan Karawale	Btech	E&TC	2nd	Backend Coordinator