

Proposed System

The proposed project has two parts: the first part is the development of a functional data analytics application for ANPR cameras, and the second part involves expanding the present system to cover more areas.

At present, all ANPR cameras owned by the Kerala Police across the state are integrated, and the database is available in the State Data Centre and having the following functionalities..

1. Hotlist Management
2. User Management
3. Live Monitoring Management
4. Search Management
5. Statistics Management
6. Violation Management
7. Data Management
8. Location Management

However, the data generated by ANPR cameras is often underutilized, despite its potential to provide valuable insights into vehicle and traffic patterns. The proposed project aims to develop a data analytics application that can extract meaningful insights from ANPR camera data and enable users to make informed decisions based on the analysis.

This project includes the development of a data analytics application for ANPR cameras. The application should be able to collect data from ANPR cameras, process it, and present it in a user-friendly manner. The application should be designed to work with a variety of ANPR camera systems, and it should be scalable to accommodate large amounts of data. The application should also provide secure data storage and user authentication to ensure the confidentiality and integrity of the data. The data collected by the ANPR system, such as number plate images, vehicle make and model, location and time of detection and that needs to be analysed.

The following are some examples, and can be added more.

- Vehicle Counting for traffic management
- To analyse the traffic flow at a particular location, which can be useful in predicting congestion, planning road infrastructure for preventing road accidents.

- ANPR data can be used to detect the speed of vehicles, which can be useful in enforcing speed limits and improving road safety.
- ANPR data can be used to track the movement of vehicles, which can help in detecting stolen vehicles, monitoring suspicious activities, and managing logistics.
- ANPR data can be used to identify suspicious vehicles and criminal activities, which can help in preventing crime and enhancing public safety.
- It should detect same number used by different vehicle in model/colour.
- Same number used in different locations at same time.

The second part of the proposed application involves enhancing the current system by adding new features and expanding integration with other databases to include more functionality.

- Integrate with the MVD (Vahan Database) to identify fake vehicles by matching their number plate and make/colour.
- Integrate with all other Department ANPR Cameras through API
- Integrate with other department applications (CCTNS/Crime Drive) to match missing/theft vehicles that cross any of the cameras.

The following deliverables are expected from this project:

1. A functional data analytics application for ANPR cameras
2. User manuals and documentation for the application
3. Training materials for users
4. Technical support during the implementation phase
5. Custom reports based on user requirements