## Case Study: Crime Analysis and Reporting System (C.A.R.S.)

### ****Project Purpose –****

Right now, many police departments still rely on paper records, spreadsheets, or disconnected tools to handle crime reports, investigations, and case tracking. That leads to delays, confusion, and often—lost time that could save lives.

So, the goal of **C.A.R.S.** is to build a modern system specifically for **law enforcement teams** to help them log criminal incidents, track the progress of cases, and analyze crime trends – all in one secure, easy-to-use platform. Whether it's a theft, fraud, or assault, every incident can be documented, assigned to officers, monitored, and analyzed using real-time data. Think of it as a digital assistant for crime investigation.

### ****Project Scope –****

This system covers a wide range of functionalities police teams need daily:

* Officers can **register cases** quickly, including all the essential details: the incident, the people involved, and what happened.
* It tracks **victims, suspects, and assigned officers** for every case.
* Officers can **monitor the investigation’s progress**, change status, and view updates in real time.
* It lets decision-makers **analyze crime trends** based on time, location, or type of crime.
* A separate dashboard shows **pending cases** that need attention.
* Each officer gets their own view to check what’s assigned to them.

### ****Key Requirements – What features should the system include?****

✅ **Login with password + live OTP** for strong security

✅ **Incident registration form** to record date, location, type, description, victims, and suspects

✅ **Case tracking** to monitor which officer is working on which case and how far along they are

✅ **Report generator** that lets you view or download summaries of cases and investigations

✅ **Dashboards**:

For officers: shows only the cases assigned to them

For higher officials: full view of all active and closed cases

For pending cases: quick access to unaddressed or open reports

✅ **Update case status** anytime (e.g., from “Open” to “Under Investigation” to “Closed”)

✅ **Evidence uploads** (images, PDFs, notes, etc.) connected to specific cases

### ****Tools & Tech Needed – What will we use to build this?****

**MySQL** – to store all data like users, incidents, and cases

**MySQL Workbench** – to visually manage and inspect the database

**Python** – to build all the logic behind the system

**Jupyter Notebook** – or **VS Code** for writing and testing our Python code