1. Data Decerebration

We will use the dataset stored in the "Crime in Los Angeles Data from 2020 to Present" database from TA-proposed datasets.
(link:https://www.kaggle.com/datasets/susant4learning/crime-in-los-angeles-data-from-2020-to-present).

This dataset stores information about the crime case, like DR_NO (A unique identifier or report number for the crime incident), Date Rptd (The date when the crime was reported), DATE OCC(The date when the crime occurred), AREA (The numerical code representing the geographic area where the crime occurred), and also includes information about the victim, the weapon and others.

2. Basic Functions

Users will be able to control the database to add/delete records and view the crime distribution, like when and where the crime is more likely to happen. Based on the query results, the government can take actions to prevent crime or manage its consequences.

For some simple features, The website can be used to create, insert, update and delete crime cases in the database. For some complex features, the system should check that one case can only be reported and create one record in the system every time after creating, inserting or updating a record.

3. Creative Component

We would like to create a map to visualize the crime distribution, and use different colors to show the danger degree of the districts. In addition, if possible, we want to try to improve the system by creating a function where users can click the specific street on the map and then directly get the input window which already has the location information. We think it is a good idea to avoid repetitive crime case creation because the user can directly see the crimes happening on the street rather than waiting for the checking result after inputting all information.

4. Project Title

LACrimeGuard

5. Project Summary:

"LACrimeGuard" is a web platform positioned as an electronic sentinel for Los Angeles that aims to showcase the intricacies of crime throughout the city. By utilizing vivid geo-visualization techniques, the site graphically maps out crime density, frequency, type, time of day, and more, allowing residents and authorities to locate areas with accuracy, as well as allowing residents to plan their trips more safely. In addition to its analytical power, "LACrimeGuard" is a dynamic community center. Users can gain insight into the status of cases, by searching for crime data based on specific locations, time periods, and even the age structure of offenders. Additionally, the platform advocates for civic engagement, enabling users to report

incidents, manage reports, and actively interact with others by responding to new reports. As the number of crimes increases and social unrest surges, "LACrimeGuard" serves as a collection of information and collaboration designed to strengthen the bonds of the Los Angeles community and create a safer environment for all.

6. Description

"LACrimeGuard" is a digital platform that we have designed to utilize the vast amount of data contained in the Los Angeles Crime Database to give users a more accurate picture of crime dynamics in Los Angeles. At its core, the app provides clear geo-visualizations that translate complex crime data into easily recognizable color-coded densities. In this way, residents can quickly determine the state of safety in different neighborhoods and make informed decisions about their actions and even their living environment.

The real-time alert system is one of the standout features of LACrimeGuard. Whenever the public reports a new crime, the system sends out a timely notification, ensuring that the community is aware of the situation much quicker than traditional police alerts. This not only enhances public safety but also builds a sense of alertness in the community. Additionally, the platform provides users with the flexibility to dive into the details of specific crimes, filtering by parameters such as location, time of day, or age group of the offender. With "LACrimeGuard", the community is not only kept informed, but also actively engaged, creating a safer environment for everyone in Los Angeles.

7. Usefulness

Our web application, a Crime Database and Visualization System, is useful for several reasons:

1). Crime Prevention and Management: It enables government agencies, law enforcement and police to take proactive measures to be on the alert and prevent crime in specific areas based on our analyzing crime data and identifying patterns.

2). Resource Allocation and Community Awareness: By visualizing crime distribution, it helps allocate law enforcement resources more effectively, ensuring that high-crime areas receive adequate attention. It provides valuable information to the public about crime incidents in their neighborhoods, fostering community awareness and engagement in crime prevention.

3). Data-Driven Decision Making and Efficient Reporting: Government officials can make informed decisions based on real crime data, leading to better policies and strategies for crime reduction. Users can easily report new crime incidents, update existing records, or search for specific incidents, streamlining the reporting process.

4). Uniqueness: In contrast to existing crime mapping and reporting apps like 'Citizen: Local Safety Alerts,' which primarily rely on real-time user-reported incidents and focus on delivering safety alerts and information about ongoing events nearby, our system stands out by utilizing comprehensive historical crime data sourced from official records in LA. This allows us to offer a more extensive perspective on crime incidents over time. Our application is not restricted to real-time alerts; it encompasses a broader range of crime data. Moreover, it offers users the ability to engage with historical crime data, report new incidents, update existing records, and visualize crime distribution on a map. Our web application is geared towards data analysis and proactive crime prevention through insights derived from historical data. It serves both individual users and government entities, whereas Citizen primarily caters to individuals. Another significant distinction is that Citizen is a paid application, while our web application is completely free to use!"

8. Realness:

Our data is sourced from the "Crime in Los Angeles Data from 2020 to Present" database on Kaggle, which contains real crime data reported in Los Angeles. This dataset is publicly available and regularly updated, ensuring the relevance and authenticity of the information.

9. Our application offers the following functionalities:

- **User Registration:** Users can create accounts and log in securely.
- **Add/Delete/Update Records:** Users can report new crime incidents, delete records (e.g., remove duplicates), and update existing records (e.g., provide additional details).
- **Search and Filters:** Users can search for specific crime incidents using filters such as date, location, crime type, or victim information.
- **Interactive Crime Map:** Users can view a map displaying crime distribution, with different colors indicating the danger degree of districts. Clicking on streets opens input forms with location information for reporting or updating crimes.
- **Reports, Insights and Alert:** Generate reports and insights based on crime data, helping government agencies make data-driven decisions and give individuals suggestions for travel routes. Provide an alert for users when he/she enters a dangerous area at a specific time.

Project Work Distribution:

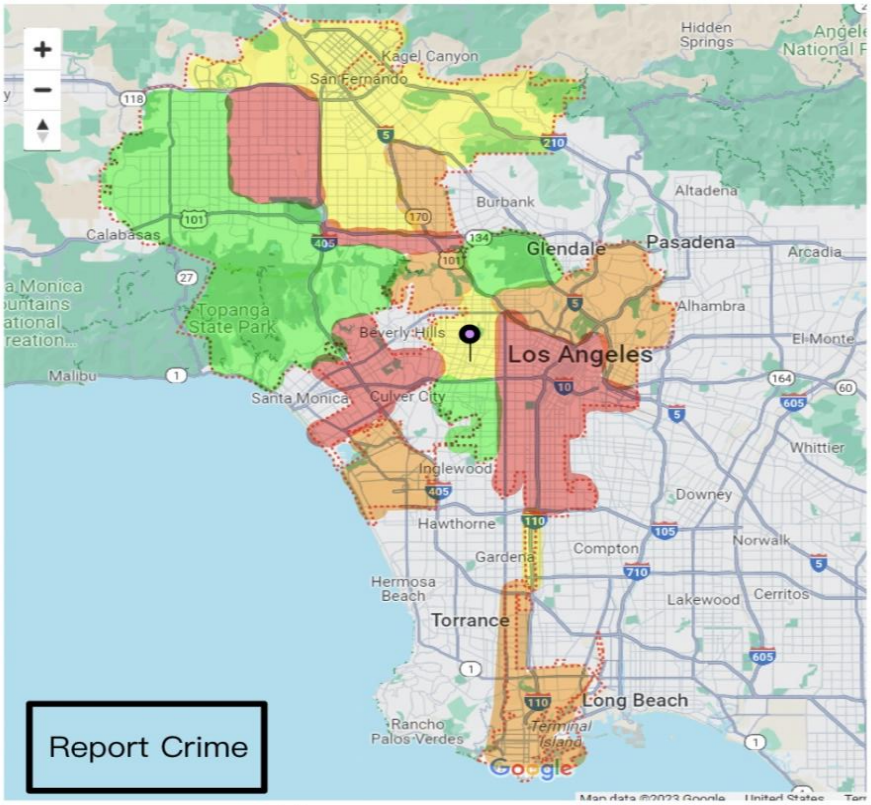
1. **Frontend Development:** Responsible for designing and developing the user interface, including the interactive map, forms, and user registration/authentication. **(Otis)**
2. **Backend Development:** Responsible for setting up the database, implementing data storage and retrieval, user authentication, and API endpoints for interacting with the frontend. (1. Database Management **(Oliver)**, 2. Data Cleaning, Import and API Development **(Ryan and Loria)**)

3. **Mapping Integration:** Responsible for integrating mapping libraries into the frontend to display crime data on the map. **(Otis and Oliver)**
4. **User Support and Documentation:** Responsible for creating user documentation and providing support for users. **(Ryan and Loria)**

CrimeInLosAngeles.com

Crime per Capita in Los Angeles

Search by zip code



Report Crime

Overall Crime | Violent Crime | Property Crime

- 5000
- 10000
- 50000
- 100000

Report crime