

# Project Proposal

## Project Title: LA Crime Heat Map

### Project Summary

- Our project aims to give users a visual heat map representation of the crime within Los Angeles. With a simple click on the map or the input of an address, the application will select that specific location and give more extensive information in regards to the crime that typically occurs there. This will allow users to accurately determine the risk when traveling to specific locations through crime rate, severity, and time of day.

### Description:

- Utilizing Google Maps' Javascript API, our team will create an interactive heatmap. Based on the number of crimes committed in a certain area and the severity, our heatmap will be able to accurately convey the "weight" of crime which occurs in a particular area at a specific time. We will be updating our map by adding specific weights to different locations (Latitude, Longitude) based on the severity of the crime. Due to the ever growing crime rate in the city of Los Angeles, our group wishes to bring awareness of these crimes to the general LA population. This project will help determine which regions are the safest at certain times of the day.

### Usefulness:

- Our application will be useful for assessing the risk associated with a given location within Los Angeles determined by an area's given crime rate and severity. Currently there are other applications that visualize crime rates and danger levels throughout LA, but none of them are able to filter out crime via time of day. Allowing the user to specify a given time block will give a more accurate representation of the risk associated with a given area. This is especially useful for travelers and tourists that are not familiar with LA and would like to stay safe during their travels.

### Realness:

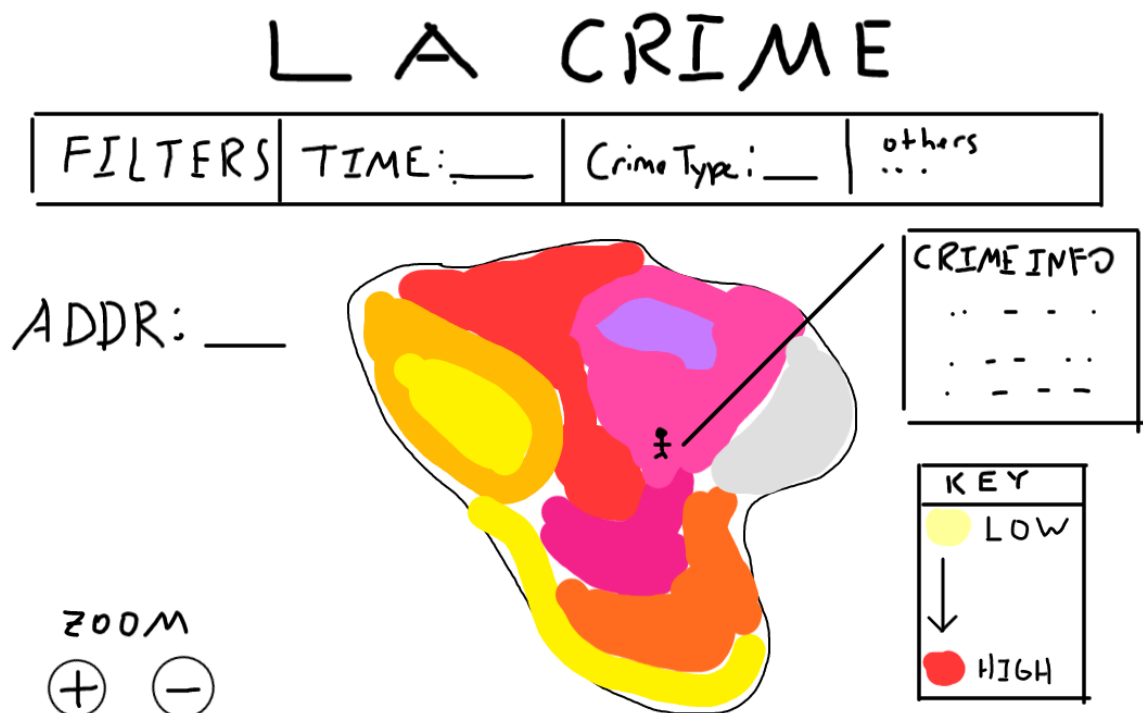
- The database we will be using is from Crime in Los Angeles Data from 2020 to Present: <https://www.kaggle.com/datasets/susant4learning/crime-in-los-angeles-data-from-2020-to-present>. It describes the crimes that occurred in LA including details such as time, type of crime and area in which it occurred.
- The database holds the following attributes:
  - DR\_NO :
  - Date Rptd ,DATE OCC, TIME OCC
  - AREA, AREA NAME, Rpt Dist No
  - Crm Cd, Crm Cd Desc
  - Latitude/Longitude
  - Mocodes
  - Vict Age Vict Sex Vict Descent
  - Premis Cd Premis Desc Weapon Used Cd Weapon Desc
  - Status Status Desc
  - Crm Cd 1 Crm Cd 2 Crm Cd 3 Crm Cd 4

- LOCATION Cross Street LAT LON

## Functionality:

- Our application will allow users to view a map of the LA area and view an overlaid heatmap that would show the rates of crimes within different areas. It would allow users to look up certain addresses and see how relatively dangerous going to that address would be based on the crime rates around the address. Another piece of functionality would allow users to filter the map based on the time of day and view a heatmap that would only show crimes that occur within that time frame, thus allowing them to see if it is safe to travel to a particular area at any given time.

## UI Mockup:



## Work Distribution:

We will divide our work by delegating 2 members (Yash and Brian) primarily to the front end and 2 members (Philip and Stanley) to the back end. Different members will be assigned specific tasks based on comfort, yet we will strive to work together and review each other's work to maintain cohesion throughout the entirety of the project.