

DSCI 510 - Final Project Proposal

Project Title: Analyzing crime patterns in Los Angeles

Name: Shruti Rao

Problem Statement:

As USC students, figuring out where to live off campus can be tough because we have to balance rent prices, distance from campus, and most importantly, safety. Crime levels can be very different from one neighborhood to another, even in areas close to USC, which makes it hard to know which places might be safer than others. Since there isn't one clear source that breaks down crime by neighborhood in a way students can easily understand, many of us end up relying on friends or guessing based on limited information. This can make the housing search stressful, especially for students who are new to Los Angeles. The goal of this project is to better understand how crime levels vary across LA so students can make more informed decisions about where to live.

Data:

Two main datasets will be used to understand how crime varies across different parts of Los Angeles. The first is the LA Open Data crime dataset, which includes details such as the type of crime, when it happened, and the location, allowing me to count how many crimes occur in each zip code. The second dataset is from the US Census American Community Survey and provides neighborhood information such as median income and population, which helps me compare crime across different socioeconomic areas. Combining these two datasets will give me a clearer picture of crime patterns in LA and help identify which neighborhoods might be safer for USC students looking for off-campus housing.

- https://data.lacity.org/Public-Safety/Crime-Data-from-2020-to-Present/2nrs-mtv8/data_preview
- <https://api.census.gov/data/2022/acs/acs5>

Analysis:

For this project, I will first organize and clean the crime dataset so I can calculate the total number of crimes that occur in each zip code across Los Angeles. Then I will combine this with Census data to compare crime levels across areas with different income and population characteristics. My analysis will focus on identifying which neighborhoods have the highest and lowest crime, as well as looking at simple patterns like crime by time of day or crime by category. To visualize these findings, I will create bar charts to compare crime counts across zip codes and scatter plots to show the relationship between income and crime.