

Crime Data Analysis

A Los Angeles Centric Analysis

Table of Content

- Questions & hypothesis
- Approach & Analysis
- Technical Challenges
- Crimes analysis by year
- Crimes analysis by neighborhoods
- Gender and Descent analysis
- New metric: Total LA population
- Average late reported crimes

Questions

1. Which year had the greatest number of crimes
2. Which areas had the most crimes.
3. Are there more crimes at night? what are the most common ones?
4. Which gender/descent is more likely to become a victim?

Hypothesis

1. 2020 might have had the greatest number of crimes due to the unrest caused by the COVID-19 Pandemic
2. The areas which are the most densely populated are likely to have a higher crime rate
3. Yes
4. Women from the racial group with the largest population are more likely

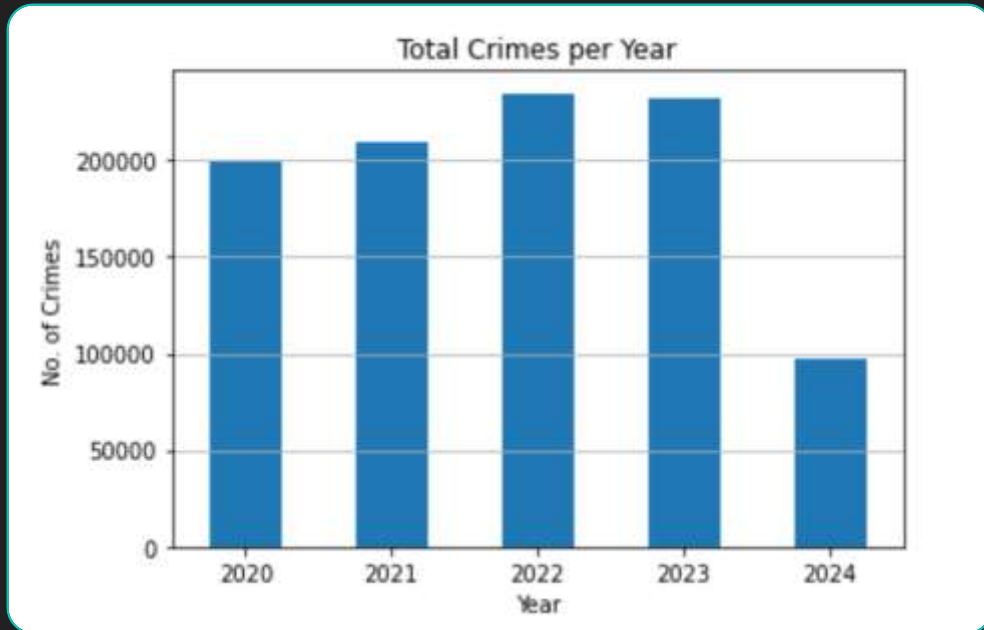
Approach and Analysis

1. Download the data from “catalog.data.gov/dataset/crime-data-from-2020-to-present” (Primary Source)
2. Standardized, clean and compiled the data
3. Columns Area, Date Occ, Date Rptd, Vict Sex, Vict Desent etc will be considered
4. Statistical inference, feature engineering and graphical visualizations will be employed

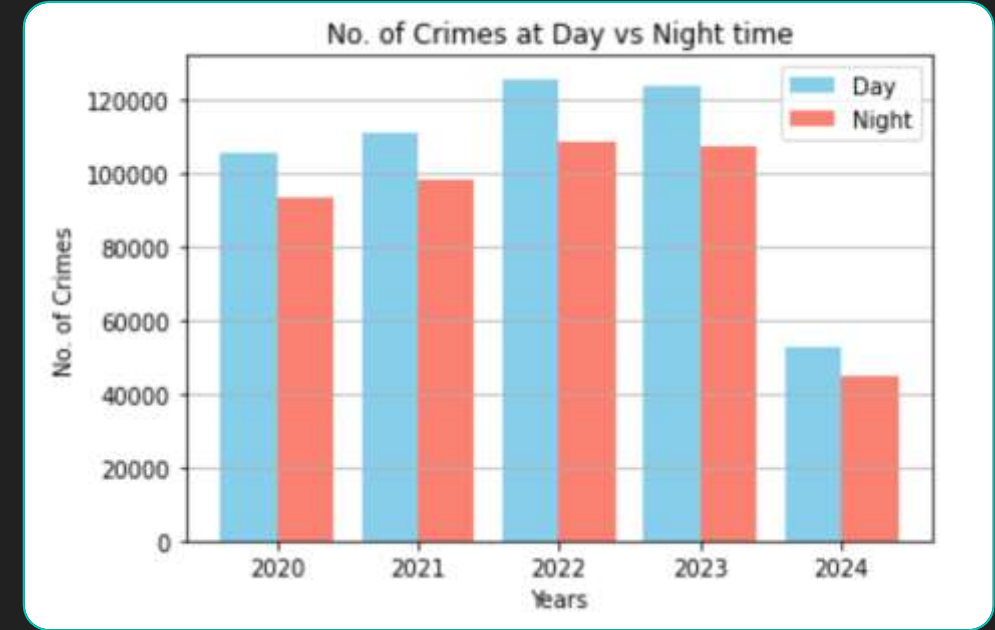
Technical Challenges

1. Dataset being clean enough, it had many irrelevant and missing-values columns
2. Column data were not in a standardized format
3. Required a lot of feature analysis
4. For deep analysis feature engineering was done

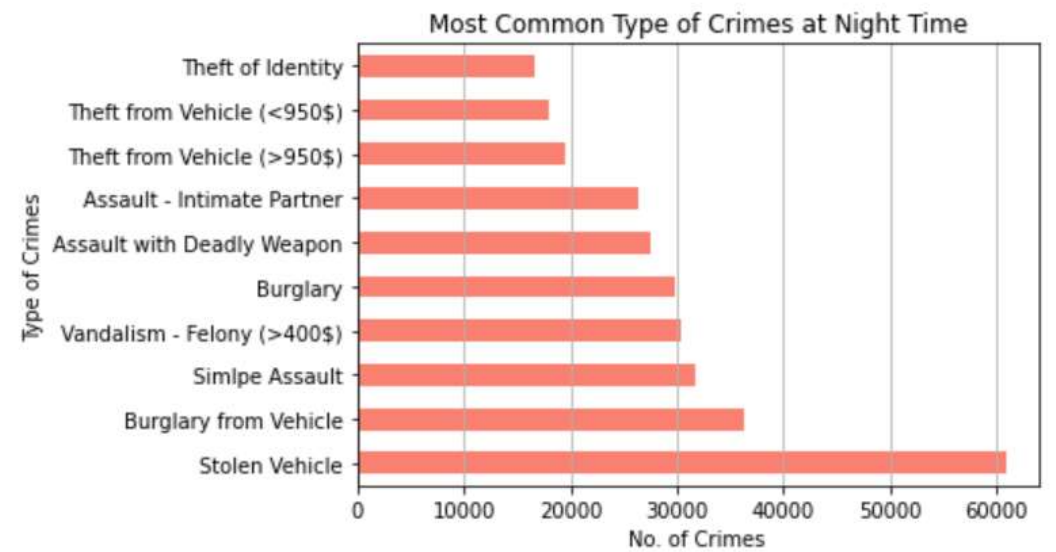
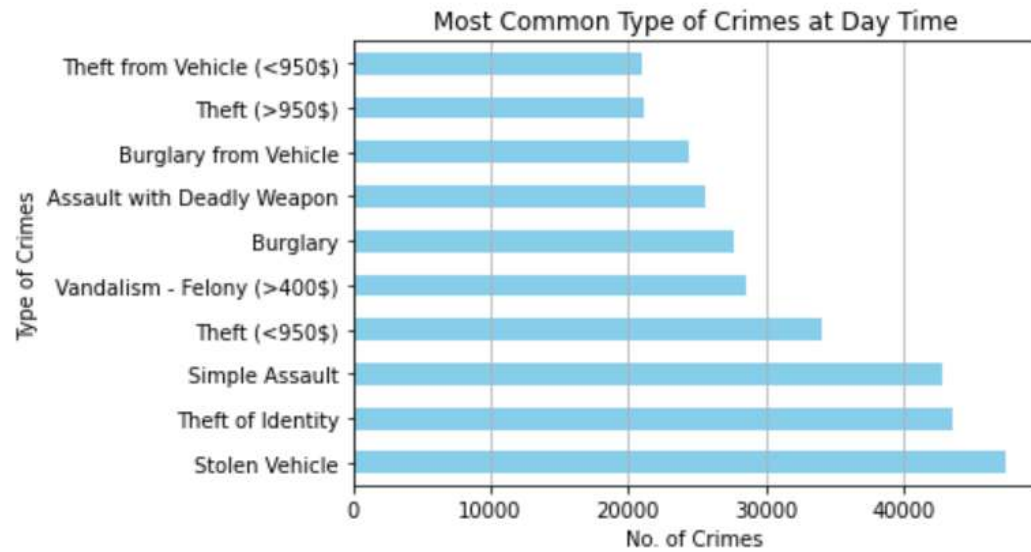
Crime analysis per year



Note: Data is only till the 2nd Sept of 2024.



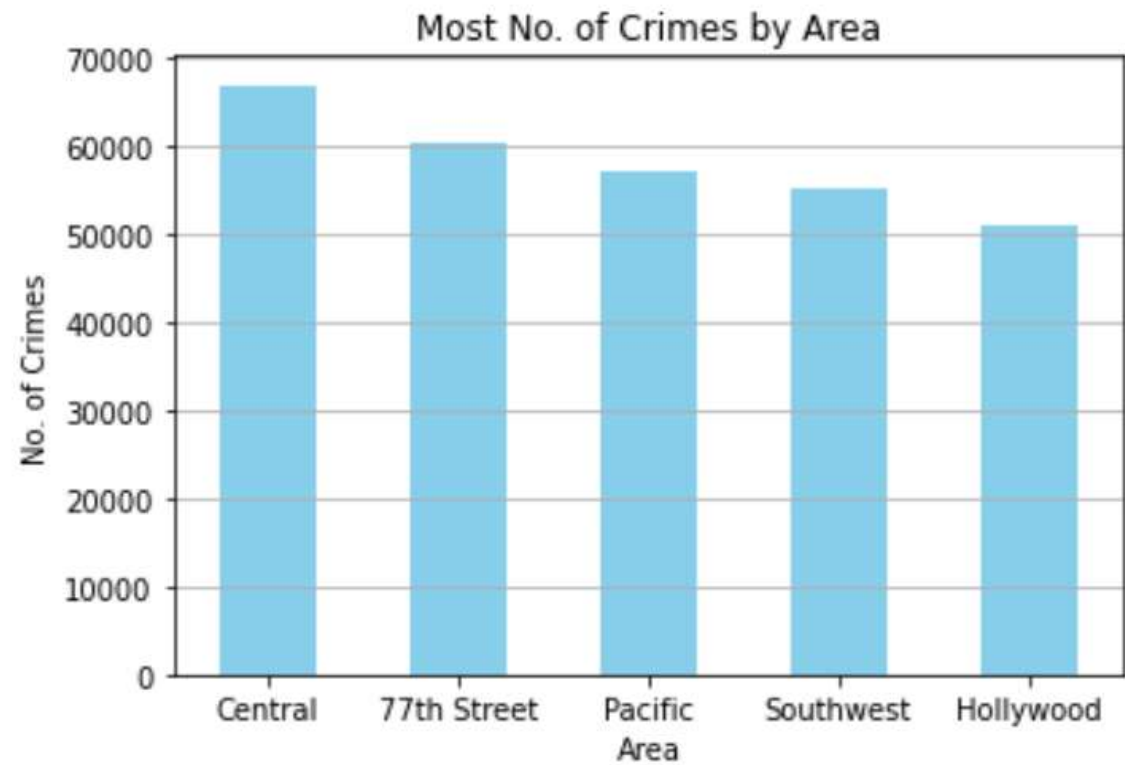
It seems that the number of crimes had peaked in 2022 with a 12% increase since 2021, while most of the crimes in the day time throughout the years.



Crimes at Day vs Night

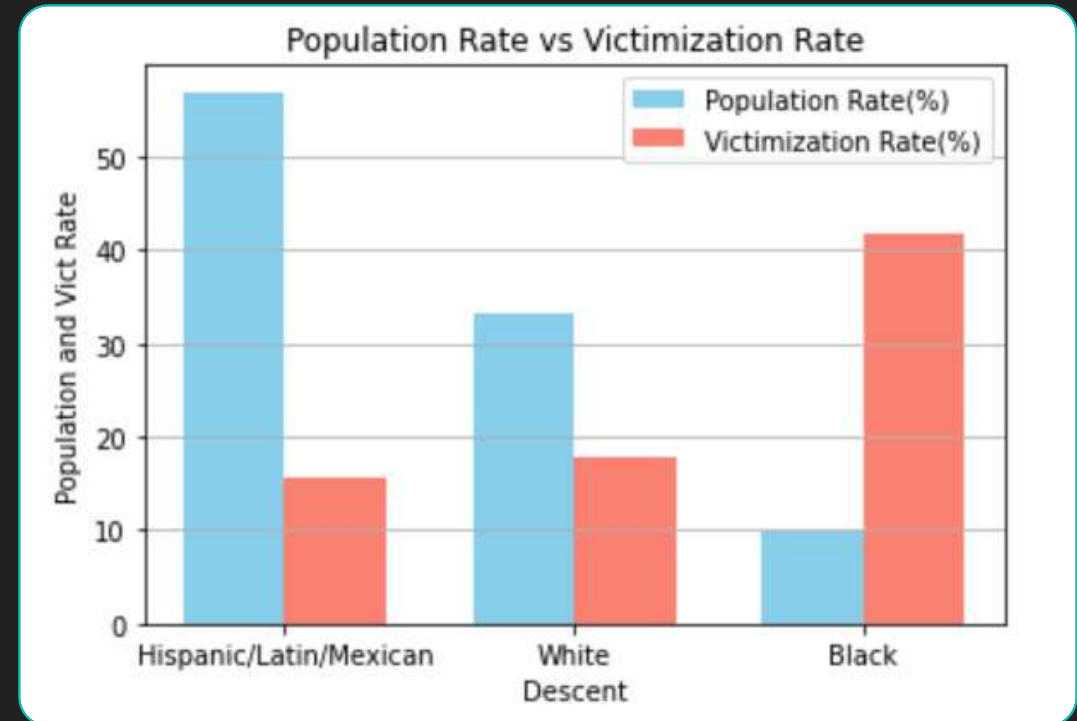
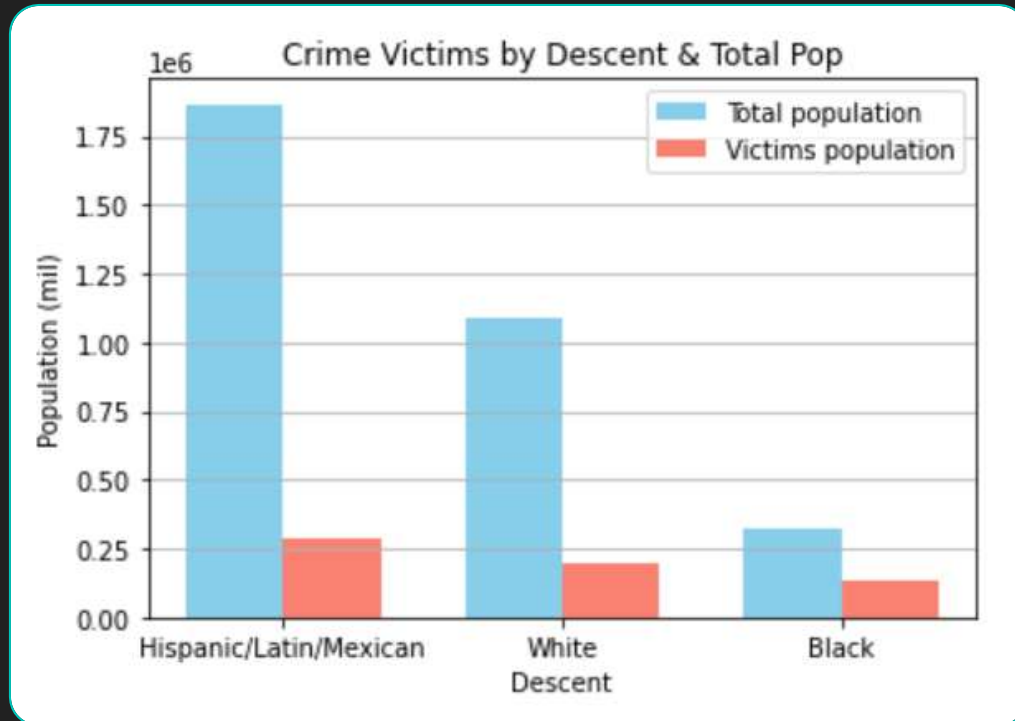
Highest No. of Crimes

1. Central LA
2. 77th Street
3. Pacific.



Deep Analysis: Gender & Descent

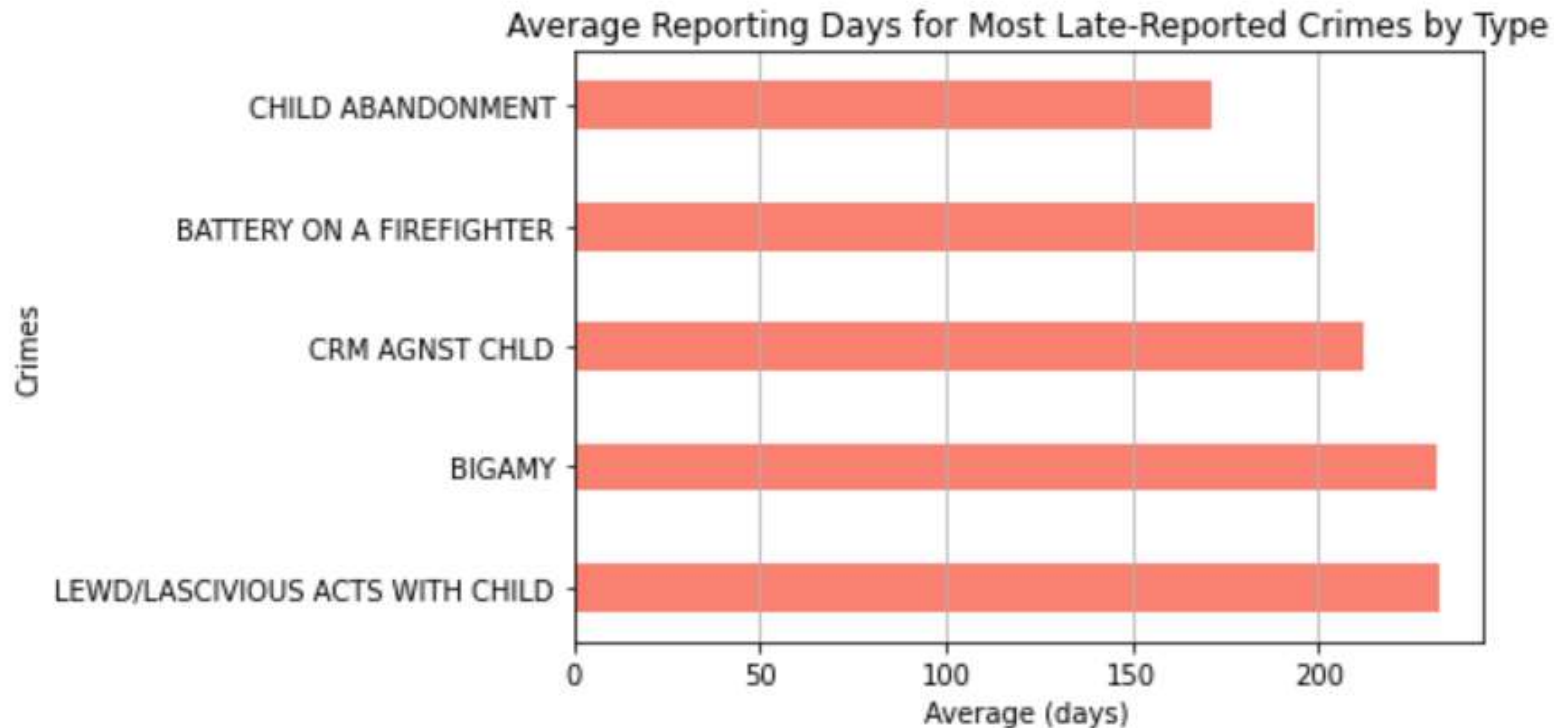
By adding a new metric of Total Population of LA

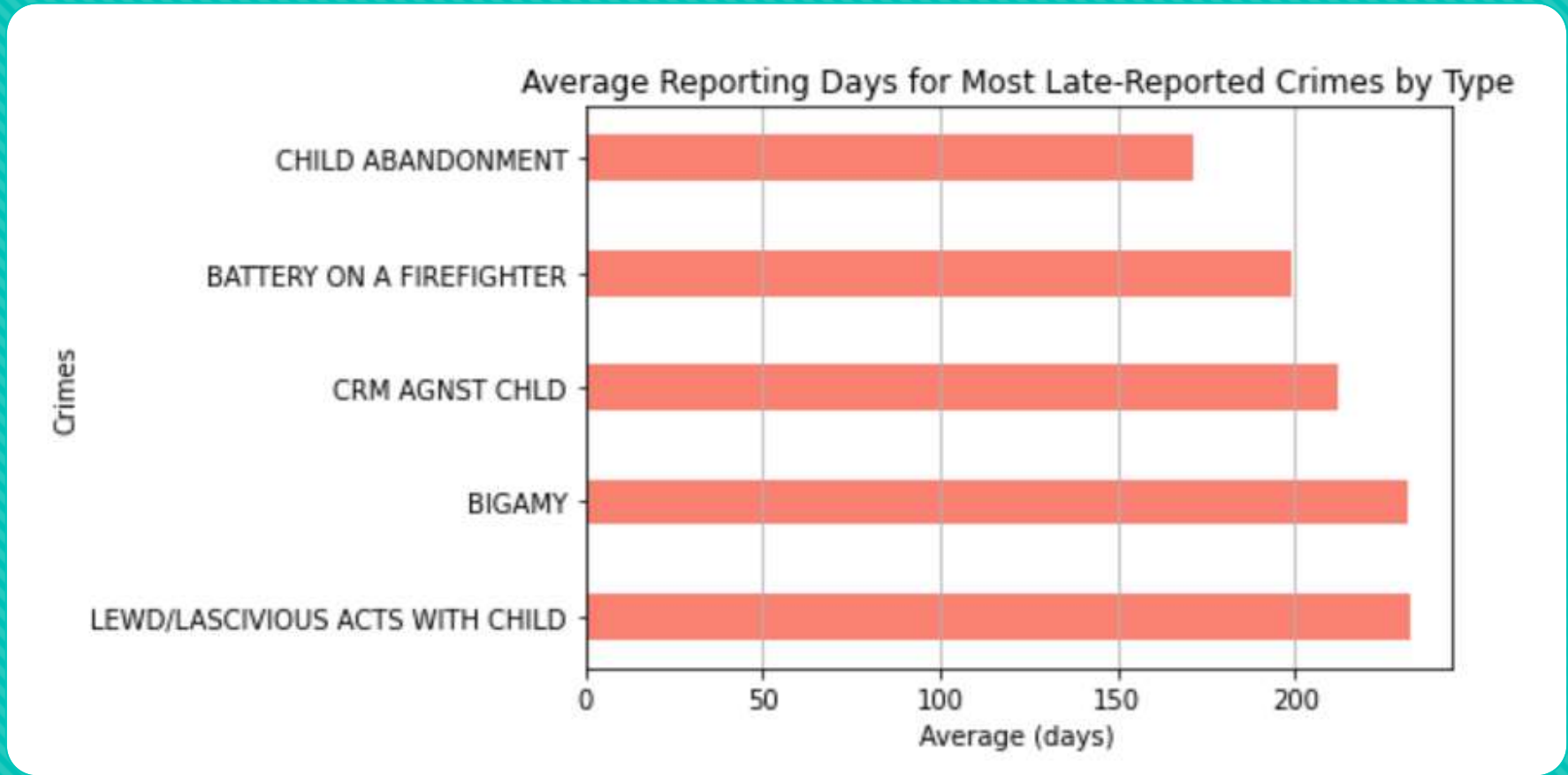


Individuals of Hispanic descent have the largest segment of the population (57%), yet they experience the lowest victimization rate (16%). In contrast, those of Black descent have the lowest population rate (10%), but face the highest victimization rate (42%).

○ Average delay of most late reported crimes

Three out of five late-reported crimes involve victims who are children, while the second being Bigamy (act of marrying one person while still legally married to another).





Crimes at Day vs Night

Final Results

- The year 2022 has the highest crime rate, a 12% increase since the previous year
- In general, more crimes are committed in daylight than night throughout the years.
- Central LA, 77th Street and Pacific have the most No. of crimes
- Even though, Black descent have the lowest population rate of 10%, they face the highest victimization rate of 42%.
- Three out of five late-reported crimes involve victims who are children, while the second being Bigamy