

Crime Data in Los Angeles



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Report as part of The Springboard Data Science Career Track

Target Audience

POLICE OFFICERS CAN
USE THIS DATA TO BE
MORE EFFICIENT ON
PATROLS



PUBLIC POLICY MAKERS
CAN USE THIS DATA TO
CREATE LEGISLATION
THAT WILL HELP
ALLEVIATE CRIME

POLICE CAPTAINS CAN
USE THIS DATA TO MAKE
DEPARTMENTS MORE
EFFECTIVE

Problems and Solutions

My analysis will consist of three main topics: **WHERE** crimes are occurring, **WHEN** crimes are occurring, and **WHO** are most victimized by crimes

Determining where crimes are occurring to aid communities that need it the most

Determining when crimes are occurring to make serving communities more efficient

Determining who are the victims of crime to help populations who are the most vulnerable

Executive Summary

- The area with the highest crime rate is 77th St.
 - Assault with a deadly weapon makes up a larger proportion of the area's crimes with firearms the primary weapon used
 - Creating and promoting campaigns like the anonymous gun buyback in this area may help curb assaults with use of a firearm
- The time with the highest crime rate is Friday Afternoon
 - Friday afternoon has a higher number of thefts than the sample as a whole
 - This could be because individuals have debts due at the end of the week and they turn to crime out of desperation
 - Creating policies to improve income distribution could reduce these types of crime
- The Latino, White, and Black populations make up the most victims
 - The distribution of age and victims appear to follow the demography of Los Angeles with the exception of Black Males who appear to be under represented
 - Black males may be reluctant to report crimes to authorities
 - Promoting community outreach programs may help increase trust with communities

Methodology and Objectives

- Purpose: Find trends in the data that can be acted upon to reduce crime
- Methodology: Explore the data visually and test if differences are significant
- Tools: Use Python to get data from the LA city's website
- Dataset: The dataset reflects incidents of crime dating back from 2010 provided from the Los Angeles Police Department, where each row is a crime incident



233,090

The Number of Crimes Reported in Los Angeles during the year 2017



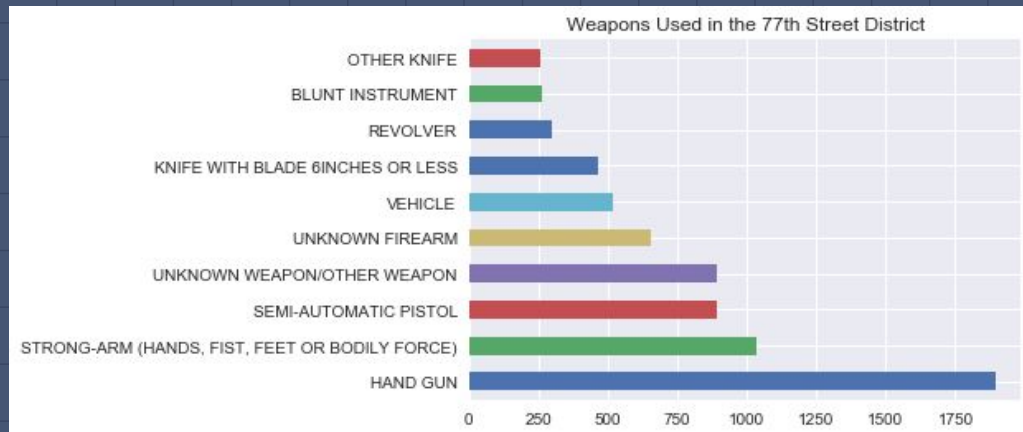
Crime Over Time



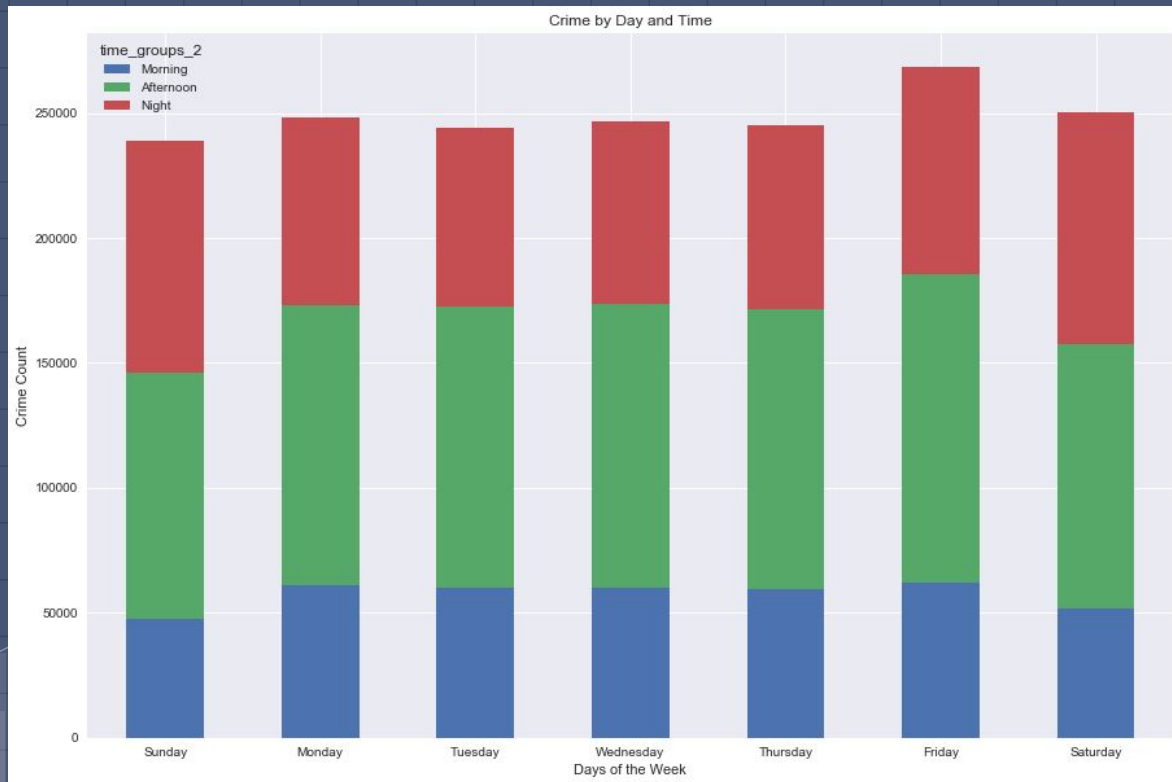
Where are Crimes Occuring?

- My analysis found that the 77th St. Area had the highest crime rate
- Approximate Population: 175,000
- Area: 11.9 Square Miles
- 77th St. has a significantly higher number of “Assaults with a Deadly Weapon” than the sample as a whole

What weapons are being used for assaults?



When are Crimes Occurring?

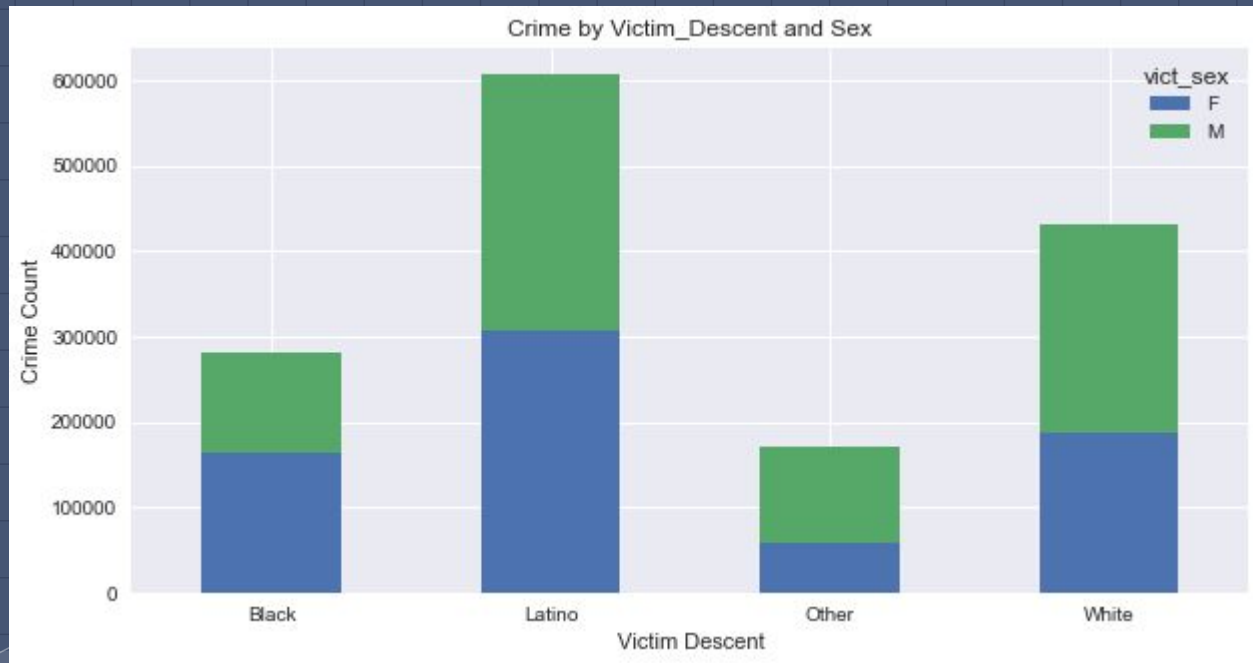


Friday afternoons show a spike in crime rate

On closer inspection Thefts appear to be come common during this time

Perhaps as a result of people with debts owed at the end of the week or more money in circulation at the end of the week

Who are the Victims of Crimes?



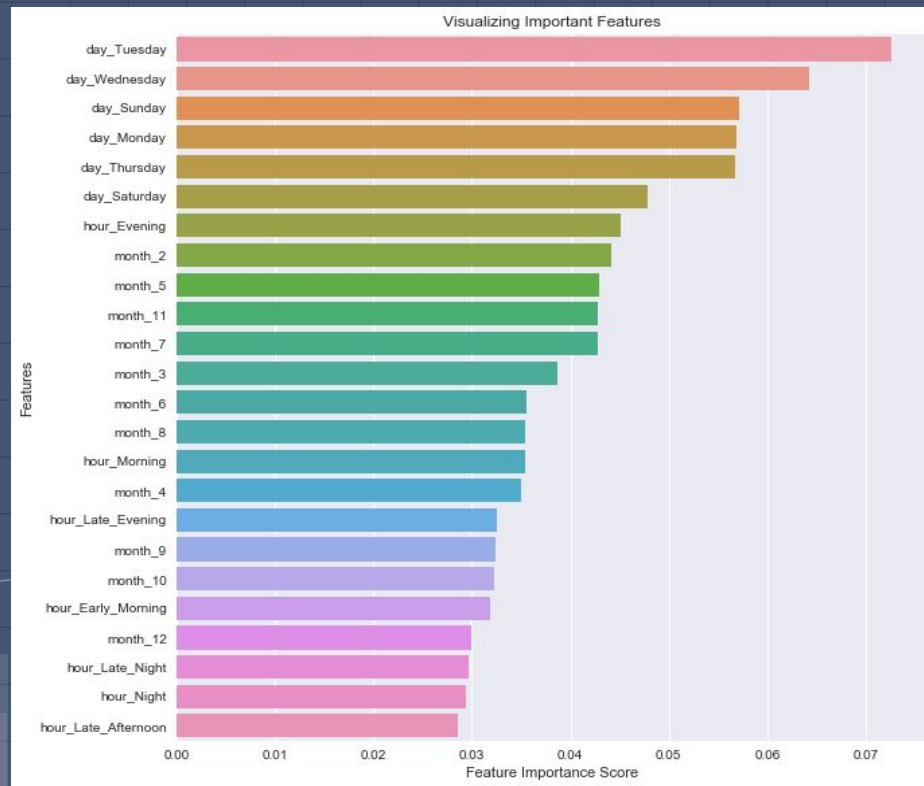
- Victims are more likely to be Hispanic, White, or Black

- Among black victims females outnumber males

- This could possibly be because Black Victims are less likely to report crimes

Predicting Where Crimes will Occur

- Finally I attempted to create a Random Forest Classifier to predict the zip code in which a crime will occur
- The most successful model, only had a 32.27% success rate, which used time of day, month, and day to predict what zip code a crime will occur within the 77th St. District
- The day of the week was the most important feature followed by month and time interspersed, as shown to the right



THANKS!

Any questions?

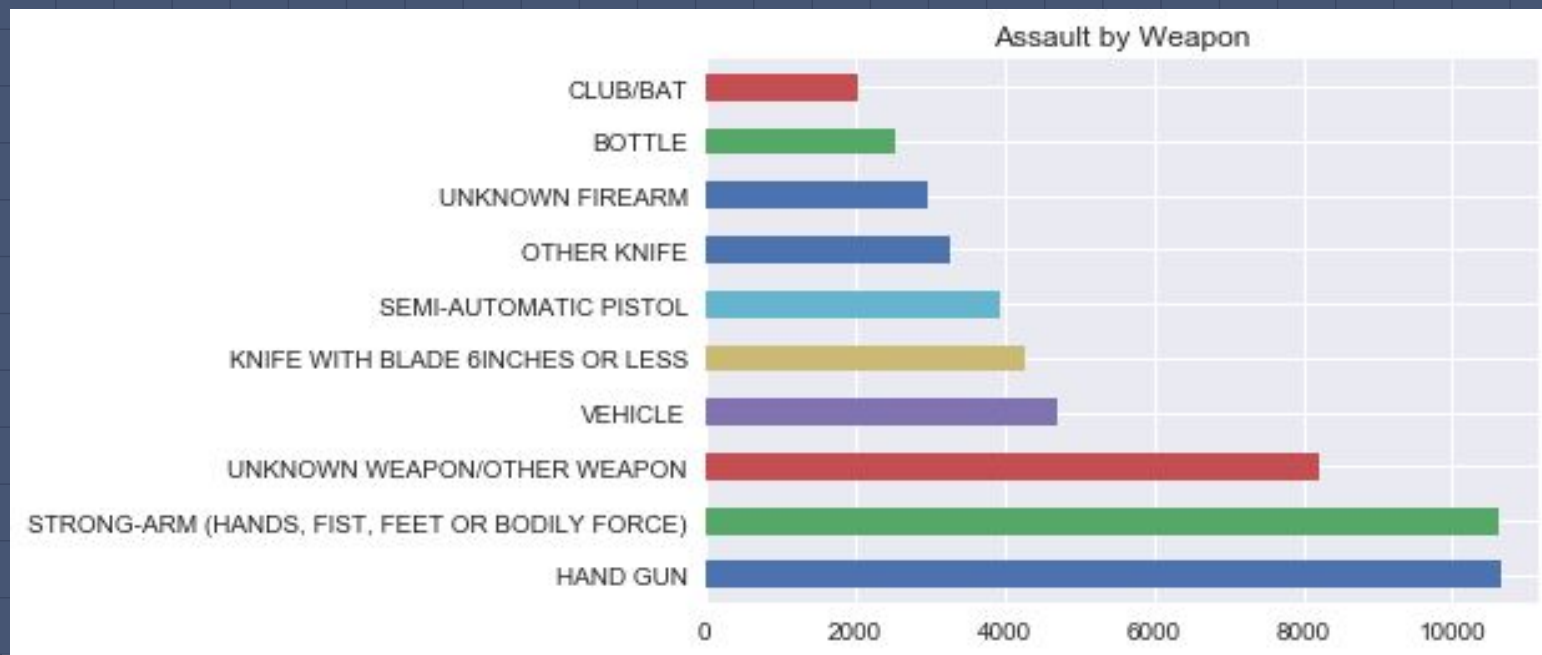
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Appendix A: Weapons used for Assault



Appendix B: Distribution of the Age of Victims

