

Capstone Project - The Battle of Neighborhoods – Report

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Introduction/Business Problem

A Food Company from New York wants to expand their restaurant business to San Francisco, California. They want to find the best place to start their business, which is suitable for the Indian restaurant. But San Francisco has so many Indian restaurants, so this company wants Data Scientist to find the Best location for their business which is near to famous attraction/location and which will be profitable to the company.

8 Factors for Choosing a New Restaurant Location according to experts:

1. Visibility
2. Parking
3. Space Size
4. Crime Rates
5. Surrounding Businesses and Competitor Analysis
6. Accessibility
7. Affordability
8. Safety

Data

Data sources

I will be using the database of the City and County of San Francisco's data (datasf.org) for the analyze. Database- Police Department Incident Reports: 2018 to Present and San Francisco Historical Secured Property Tax Rolls 2007–2015.

Links

[Police Department Incident Reports: 2018 to Present](#)

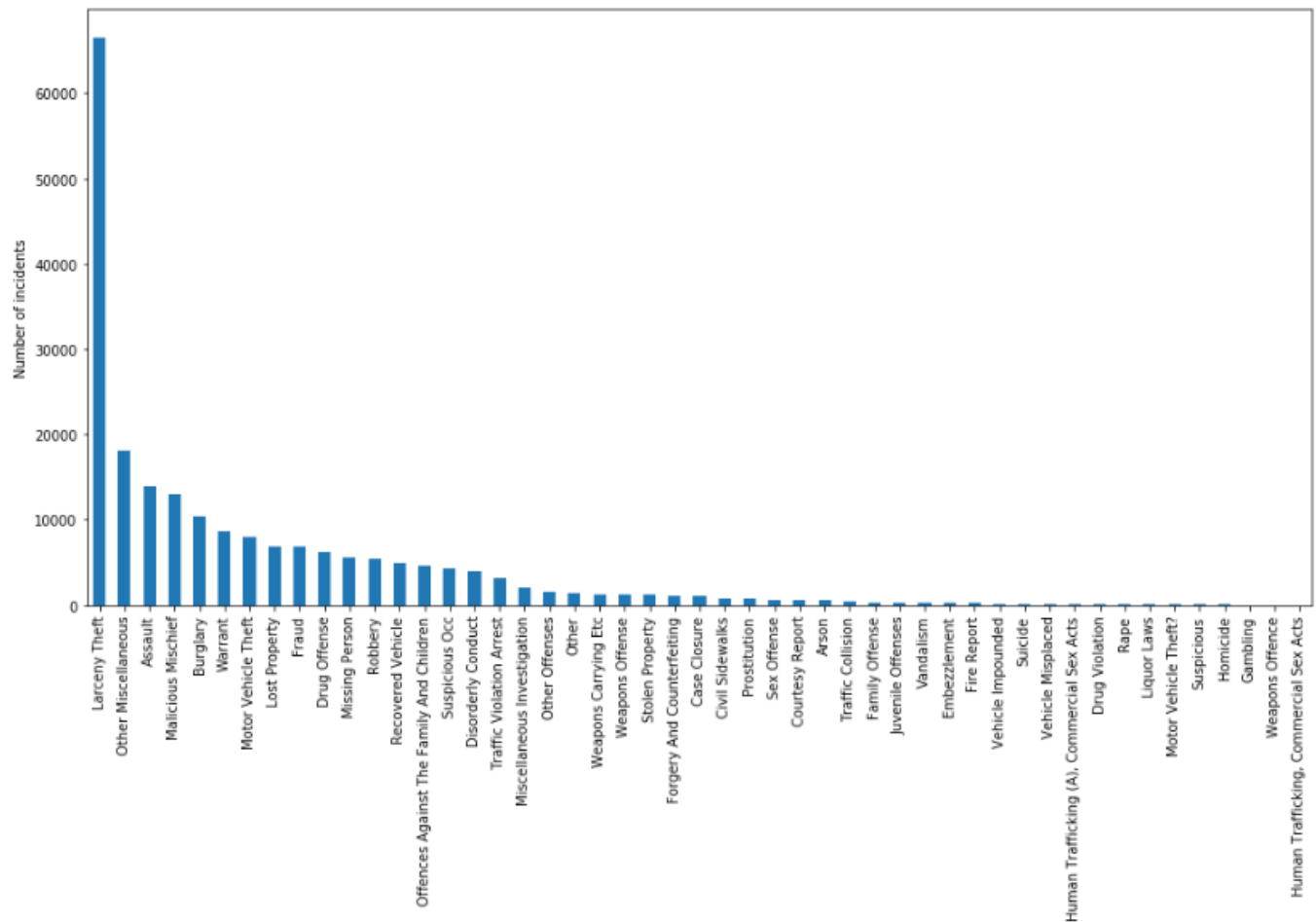
[Secured Property Tax Rolls 2007–2015](#)

Data Cleaning

Data downloaded or scraped from multiple sources were combined into one table. We remove columns that are not needed for the analysis — dropping NaN rows from the remaining dataset. Remove the 'Non-Criminal' column. Process the crime data for mapping. Normalize the Data to fit the process.

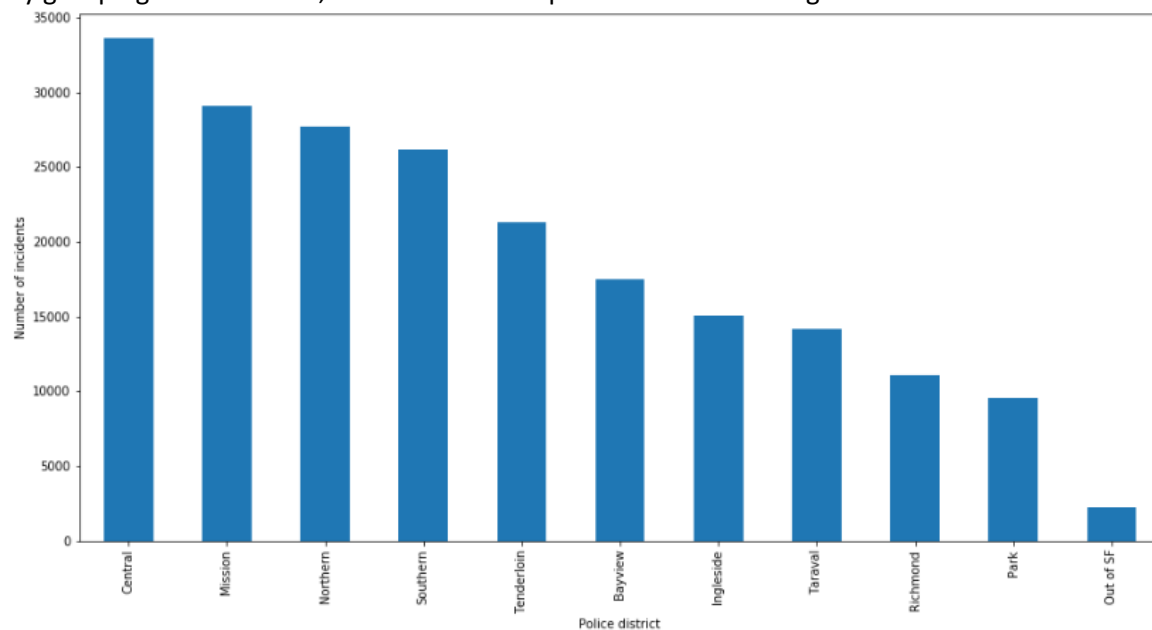
Exploratory Data Analysis

Visualize crime distribution by category



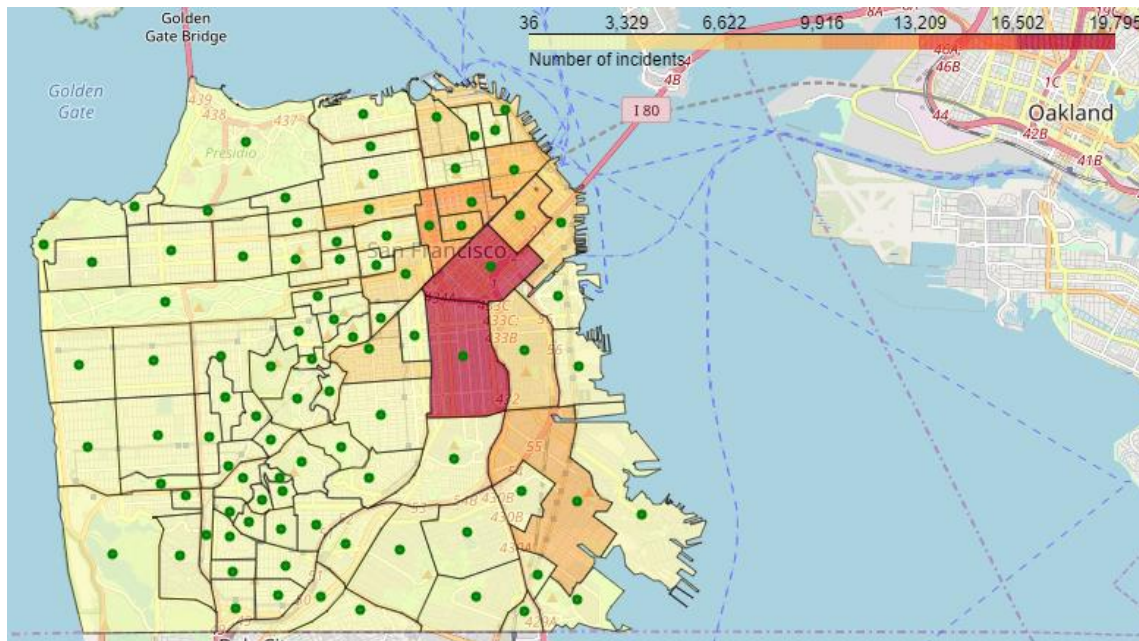
Through this graph, we know the type of crime committed most often in the city.

By grouping Police District, we can see which police district has a high number of incidents



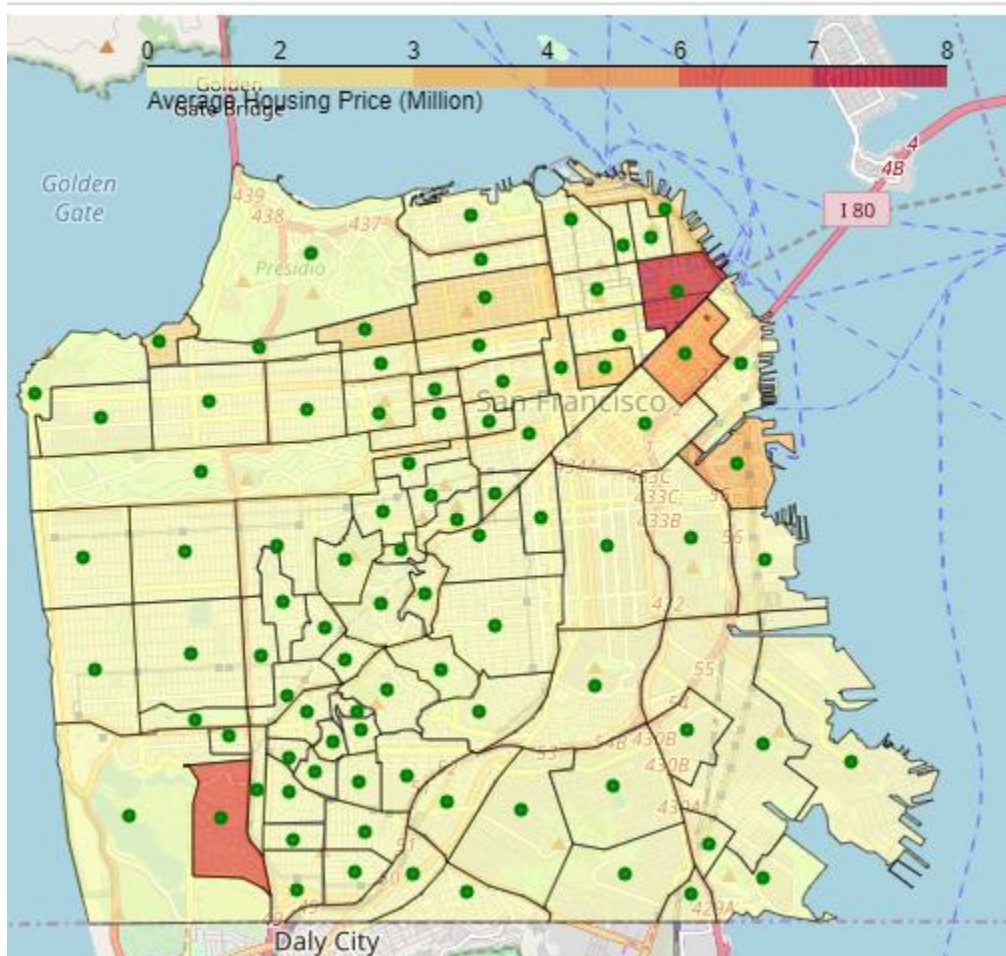
Looking at the graph, we can see that Central, Mission, Northern, Southern, and Tenderloin Districts combined to contribute the majority number of incidents to the report. And these are busiest places in San Francisco.

When we combine the San Francisco's map and incident report, we get an overview of San Francisco's crime map and locations.



In addition to the map, we also created popups (green dots) that display detailed neighborhood crime data.

When we combine the San Francisco's map and property price list in a map, we get an overview of San Francisco's average property price map and locations.



When we analyze both San Francisco's crime map and San Francisco's average property price map we can see that "Russian Hill" neighborhood is the best place to start a new restaurant business, which has low property rate and less crime report. And which all the 8 Factors to start a restaurant business. This place is visible to public Visibility, have Parking spaces, less Crime Rates, Surrounded by businesses and competitor, easily access to the public, affordability to the company, and safety.