



CAPSTONE PROJECT: BATTLE OF THE NEIGHBORHOODS

APPLIED DATA SCIENCE SPECIALIZATION BY IBM

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1. Introduction

Definition of the business problem and the target audience.

2. Data

Description of the data and sources used to solve the problem.

3. Methodology

Discussion of the exploratory data analysis, the inferential statistical testing, and the machine learnings that were used.

4. Results

Presentation of the results.



OBJECTIVE

Choose the ideal location for the expansion of a New York City based gallery to San Francisco.

Critical factors

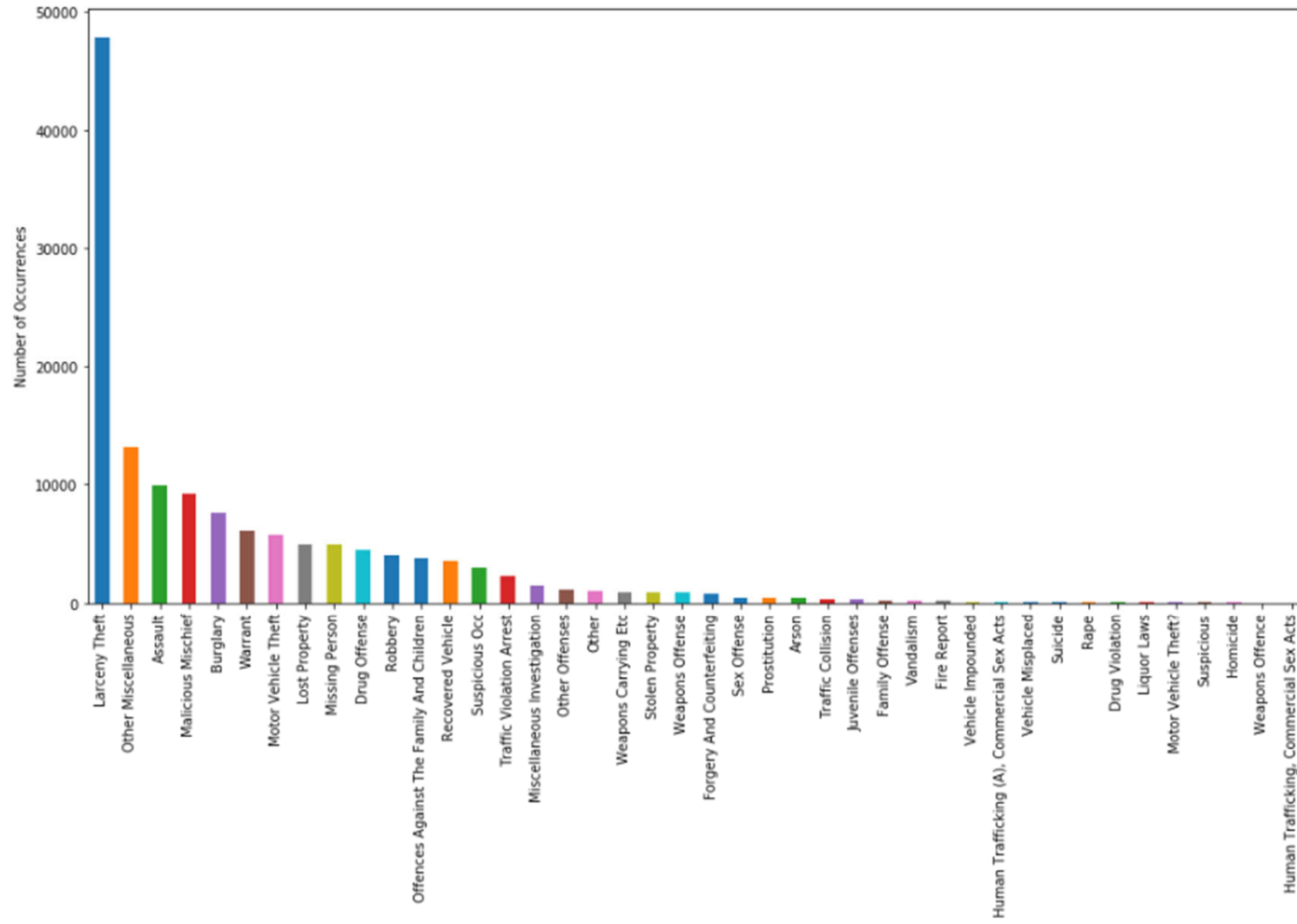
- ☐ Neighborhood safety, accessibility and visibility
- ☐ Surrounding businesses and possible competitors
- ☐ Space size and affordability
- ☐ Comparative analysis of the neighborhoods of the existing and proposed locations



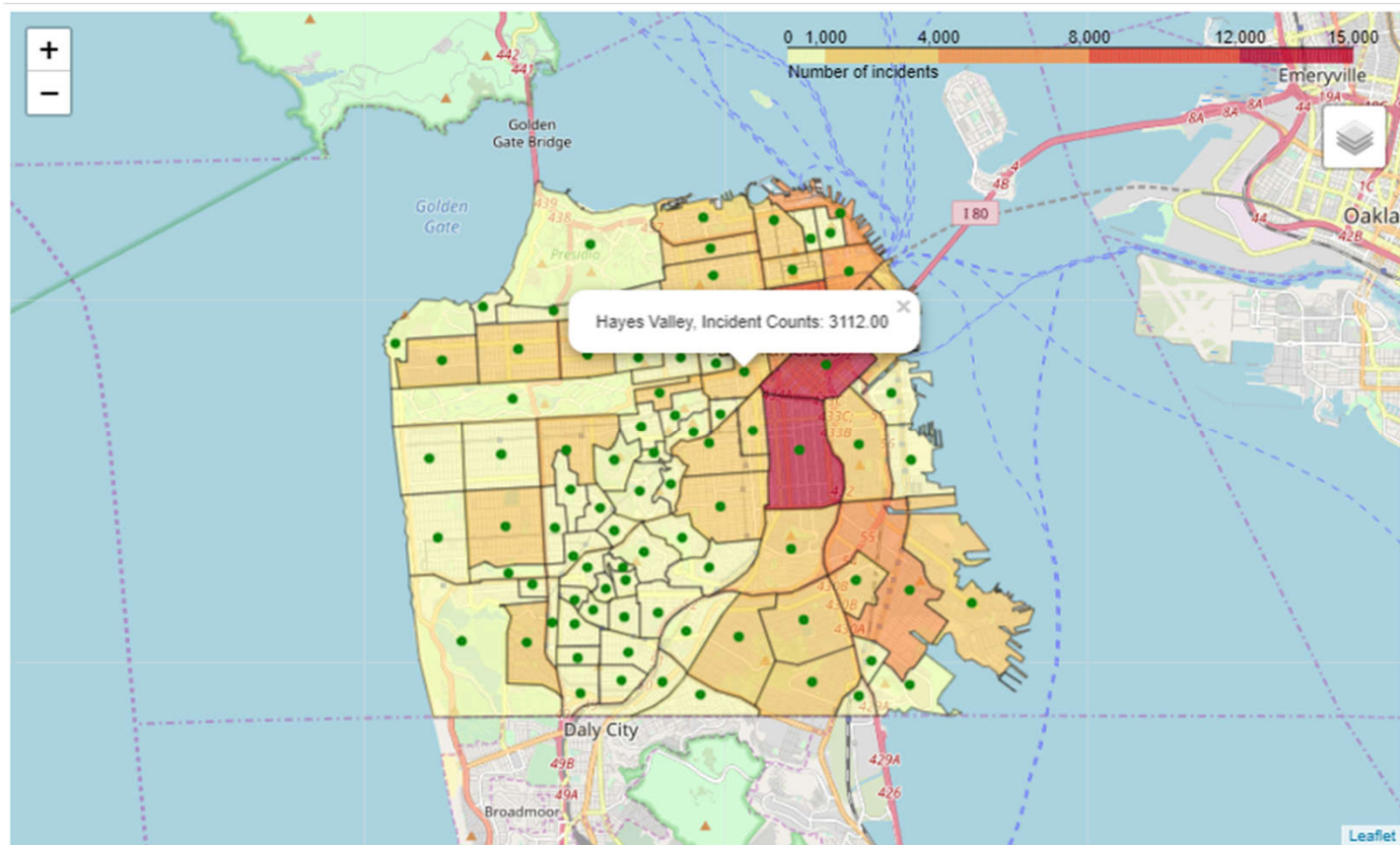
DATA SOURCES

1. San Francisco Police Department's dataset
2. San Francisco's public transportation geodata such as subway and bus stations as well as the MTA's on- and off- street parking census.
3. Foursquare for the visibility factor that different neighborhoods can provide.
4. Foursquare for competition analysis.
5. Foursquare for complimentary venues such as cafes and restaurants.
6. Real estate agencies and accommodation search engines.





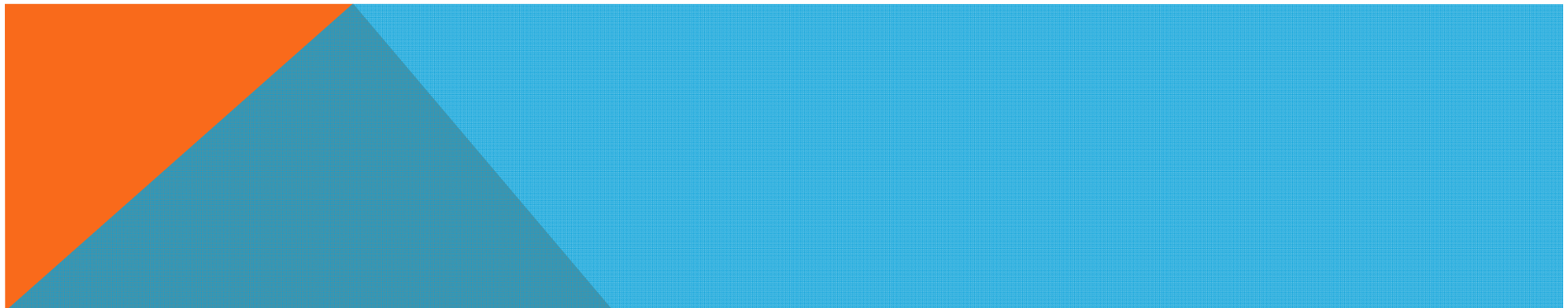
SAFETY FACTOR ANALYSIS

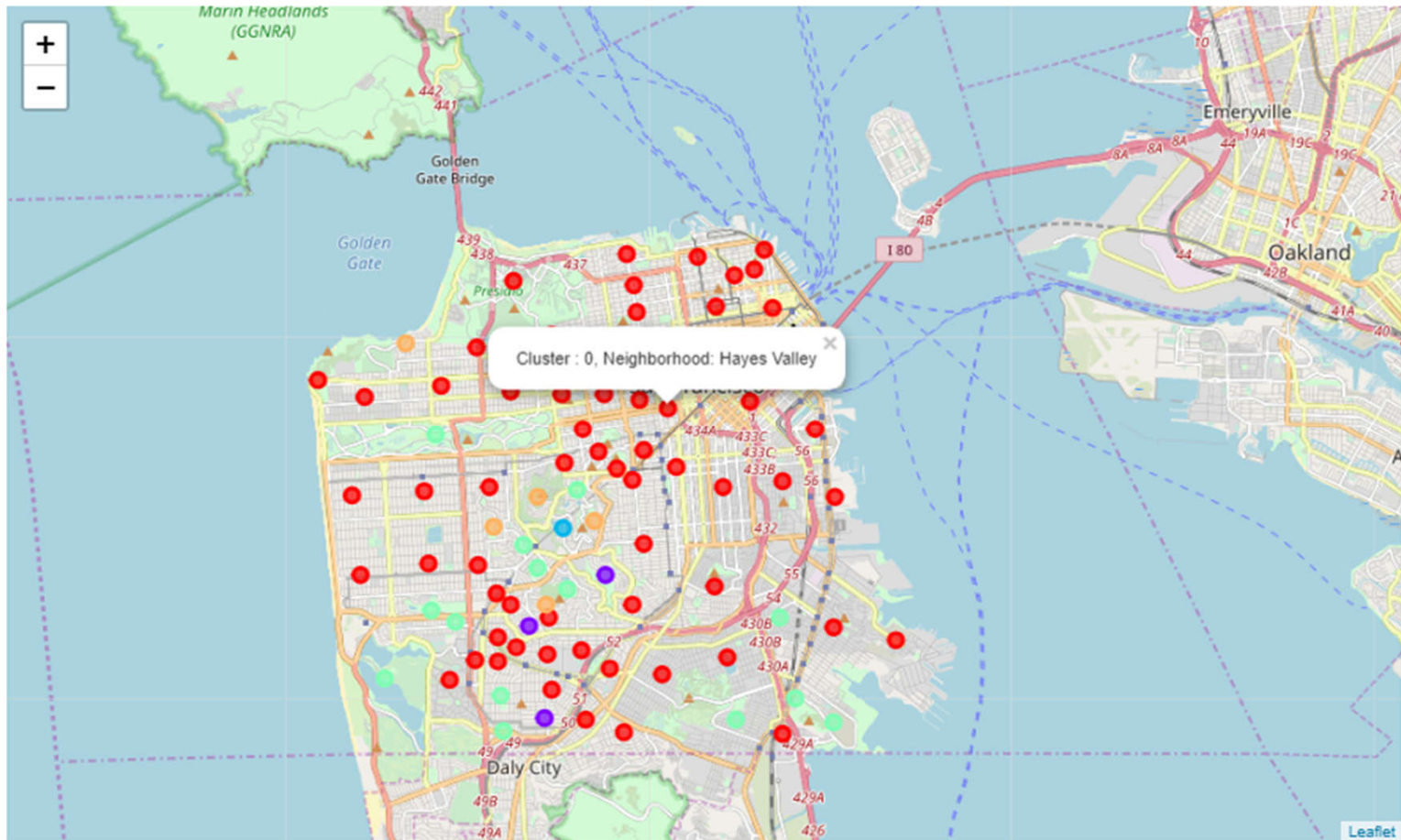


CRIME INCIDENTS CHOREOPLATH MAP

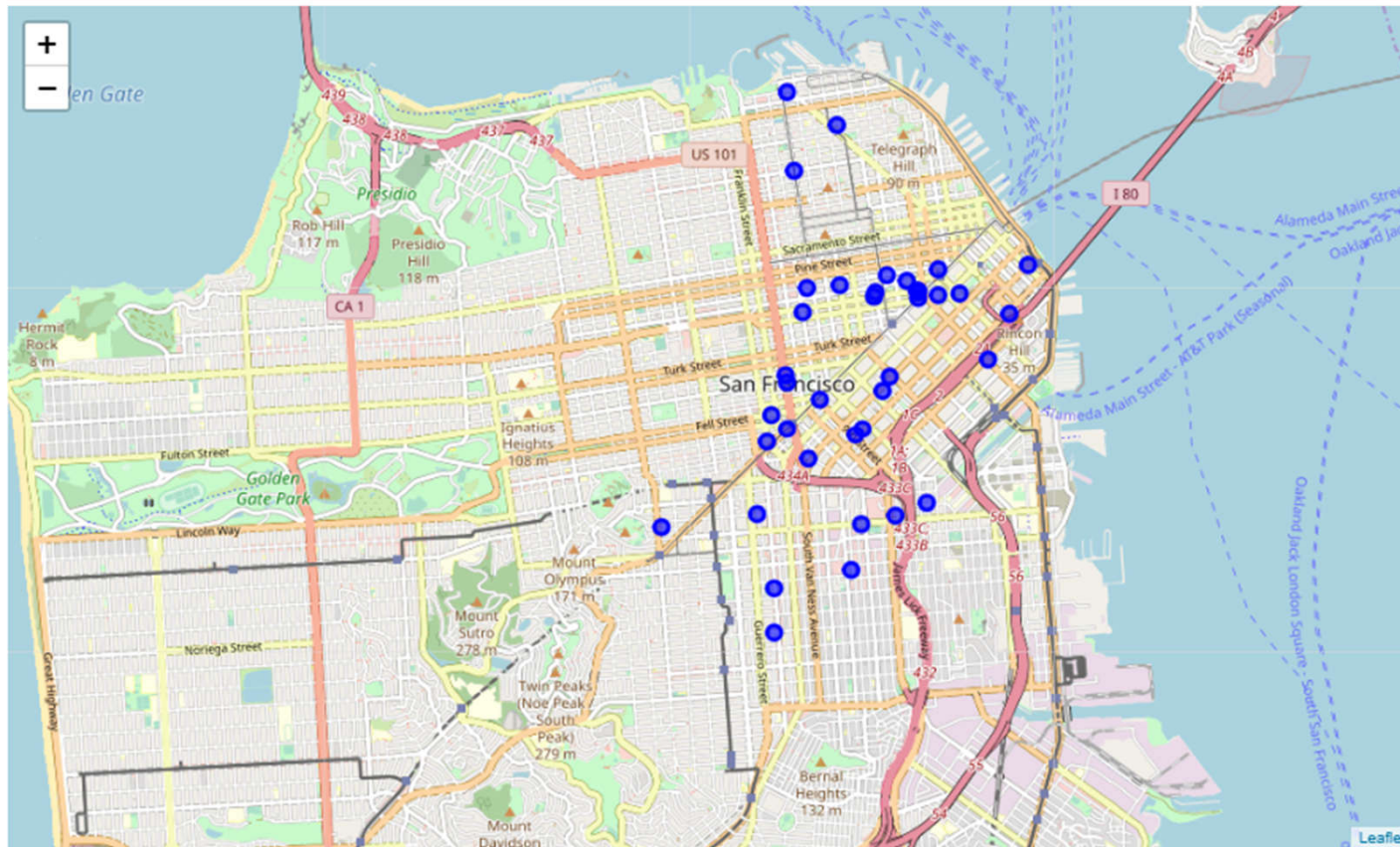
100 Most Popular Venues At A 500m Radius For All San Francisco Neighborhoods

	nbrhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Alamo Square	Bar	Record Shop	Gift Shop	BBQ Joint	Ethiopian Restaurant	Italian Restaurant	Mediterranean Restaurant	Sushi Restaurant	Cocktail Bar	Pizza Place
1	Anza Vista	Café	Coffee Shop	Health & Beauty Service	Burger Joint	Cosmetics Shop	Mexican Restaurant	Grocery Store	Tunnel	Sandwich Place	Big Box Store
2	Balboa Terrace	Light Rail Station	Japanese Restaurant	Vietnamese Restaurant	Gym	Thai Restaurant	Pharmacy	Bakery	Circus	Dessert Shop	Playground
3	Bayview	Southern / Soul Food Restaurant	BBQ Joint	Gym	Café	Park	Food	Plaza	Bakery	Theater	African Restaurant
4	Bayview Heights	Breakfast Spot	Park	Burger Joint	Light Rail Station	Food	Exhibit	Farmers Market	Fast Food Restaurant	Filipino Restaurant	Flower Shop





K-MEANS CLUSTERS



COMPETITOR ANALYSIS

RESULTS

Most common crime : Larceny theft

Neighborhoods with the most incidents : South of Market and Inner Mission.

Central Neighborhoods with fewer incidents: Mission Dolores, Hayes Valley and Western Addition

Hayes Value neighborhood: lot of cafes, bars and restaurants

Fell Street:

- ❖ central & low risk
- ❖ high neighborhood traffic
- ❖ low competition

The proposed location for the new gallery would be Fell Street in Hayes Neighborhood.

