1 Introduction/ Business Understanding

- San Francisco is as famous for its restaurants and food trends as it is for its Golden Gate Bridge and cable cars.

- In 2019, San Francisco hosted 26.2 million visitors, contributing an estimated $10.2 billion to the local economy.

- The project is to help visitors making decisions on where to find the appropriate neighborhoods and having a good understanding on the most popular venues in San Francisco in general and where the according neighborhoods are.

- Proposed Questions:

  ➢ What are the most popular venue categories in San Francisco?
  ➢ What are the most popular restaurants in San Francisco?
  ➢ Where are the neighborhoods to those popular categories?
  ➢ What are the most visited neighborhoods in San Francisco?

2

Data Acquisition & Cleaning

1. San Francisco Neighborhoods as Zip Codes, this dataset consists of San Francisco Neighborhood names and zip codes. It is scraped from:
http://www.healthysf.org/bdi/outcomes/zipmap.htm

2. United States Zip Codes, this dataset consists of US zip codes, longitude and latitude. It is downloaded from:
http://docs.gaslamp.media/wp-content/uploads/2013/08/zip_codes_states.csv

3. Foursquare API Data
By using this Foursquare API we will get all the venues in each neighborhood.

By merging the first two dataset to generate the clean dataset contains San Francisco Neighborhood, zip code, longitude and latitude.
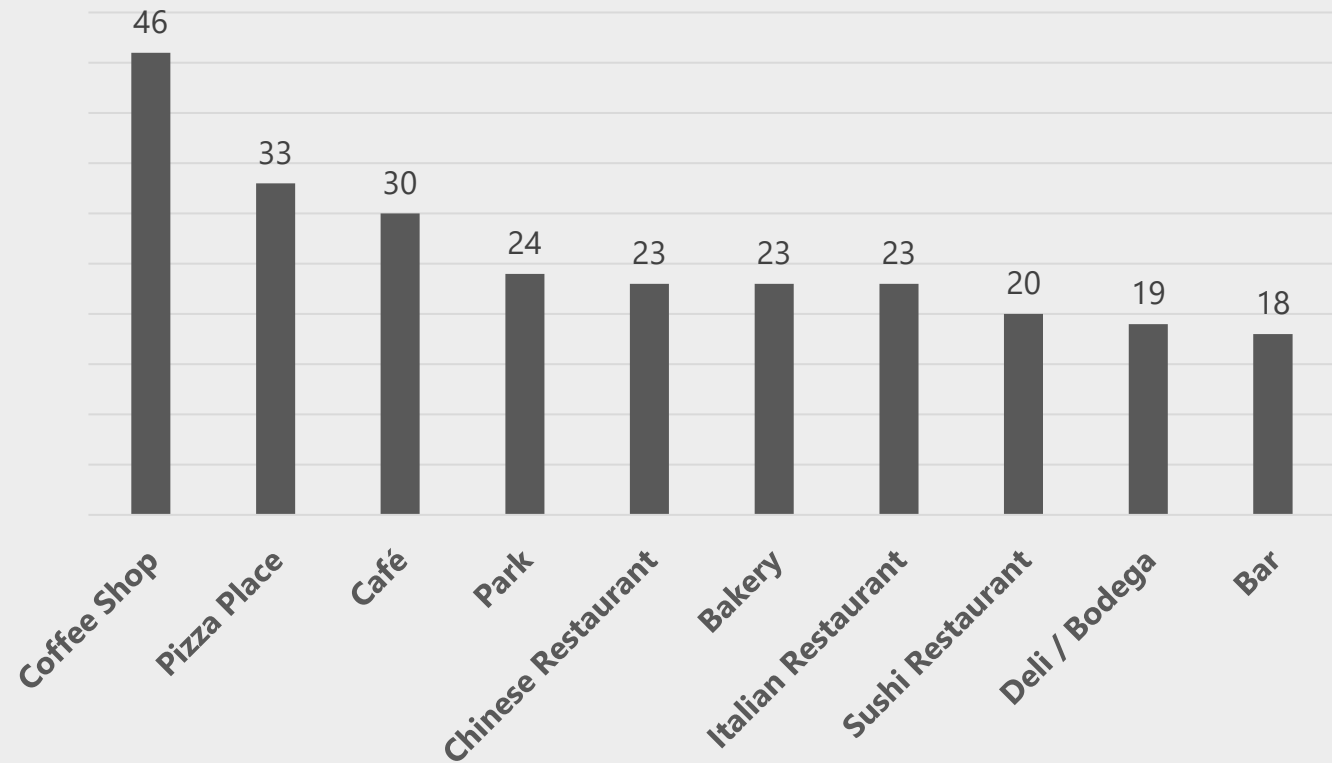
3 Data Visualization

10 Most Visited Venues In San Francisco

Venue	Visits
Coffee Shop	46
Pizza Place	33
Café	30
Park	24
Chinese Restaurant	23
Bakery	23
Italian Restaurant	23
Sushi Restaurant	20
Deli / Bodega	19
Bar	18

The top 3 most visited places are Coffee Shop, Pizza Place and Café, with the visits number of 46, 33, 30 respectively.

3 Data Visualization

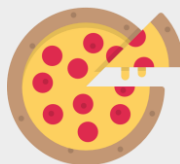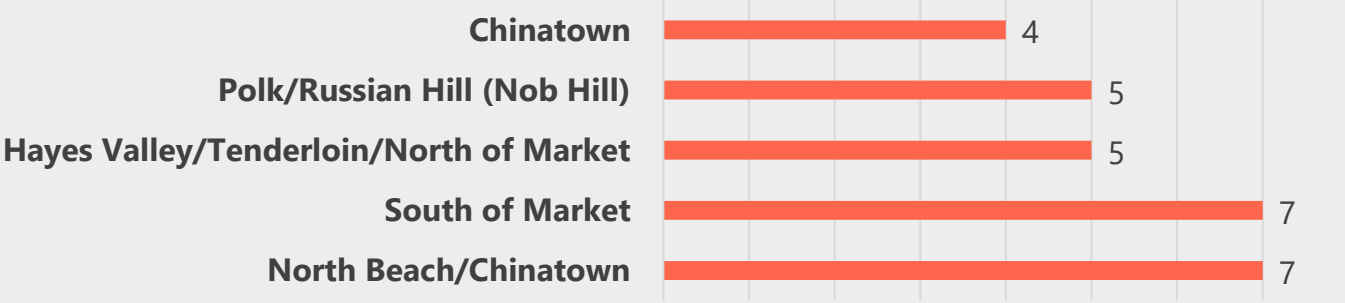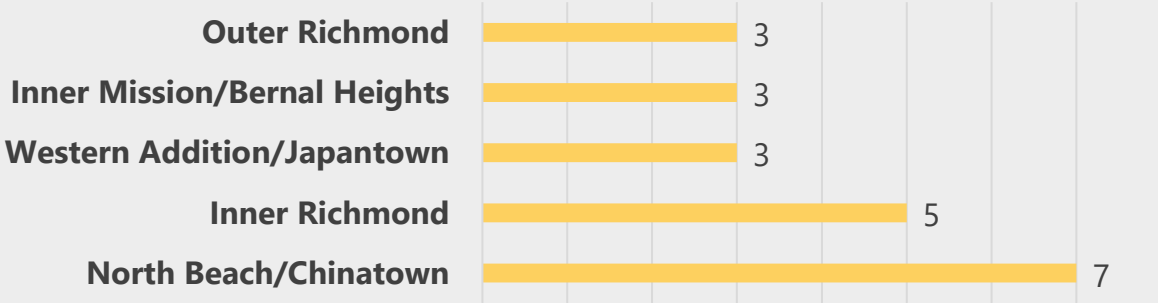**Top 5 Neighborhoods for Coffee Shop in San Francisco**

Neighborhood	Count
Chinatown	4
Polk/Russian Hill (Nob Hill)	5
Hayes Valley/Tenderloin/North of Market	5
South of Market	7
North Beach/Chinatown	7

Top 5 Neighborhoods for Pizza Places in San Francisco

Neighborhood	Count
Outer Richmond	3
Inner Mission/Bernal Heights	3
Western Addition/Japantown	3
Inner Richmond	5
North Beach/Chinatown	7

3 Data Visualization

Top 5 Neighborhoods for Café in San Francisco

Neighborhood	Value
Chinatown	3
South of Market	3
Hayes Valley/Tenderloin/North of Market	3
Outer Richmond	3
North Beach/Chinatown	6

5 Most Visited Neighborhoods in San Francisco

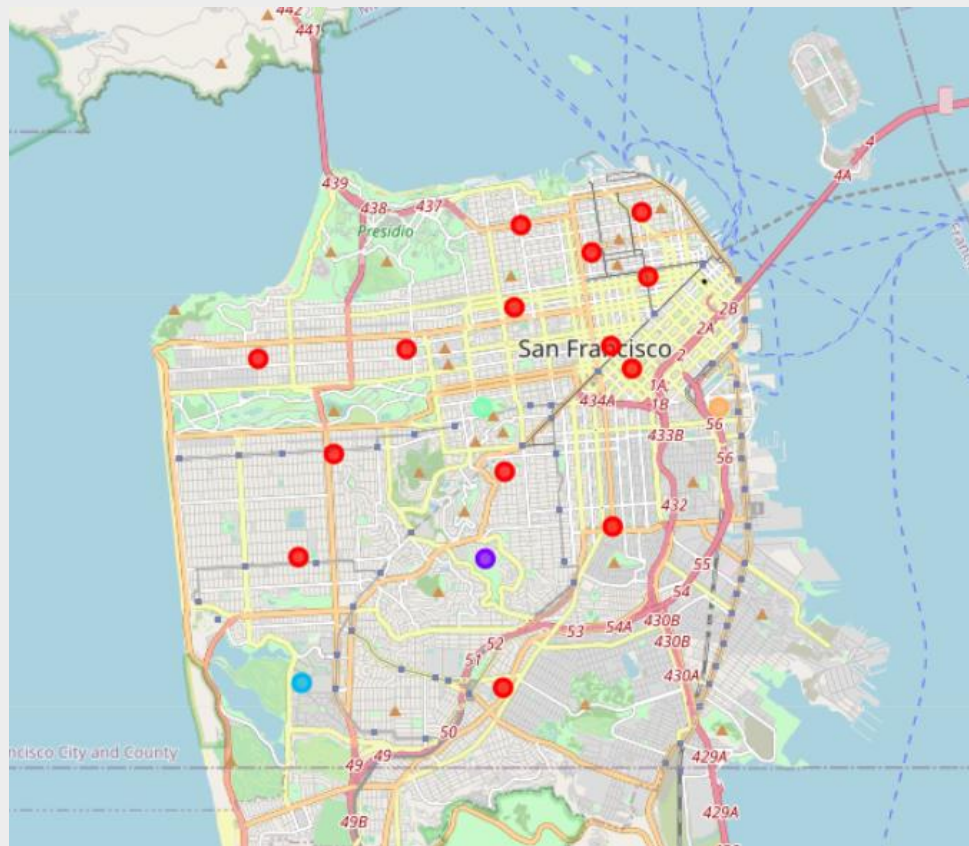| Neighborhood	Value
Chinatown	82
North Beach/Chinatown	93
Marina	100
South of Market	100
Western Addition/Japantown	100
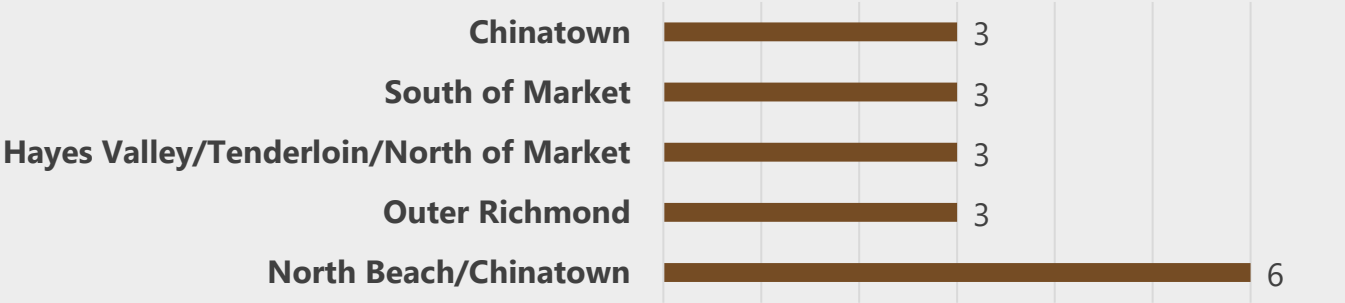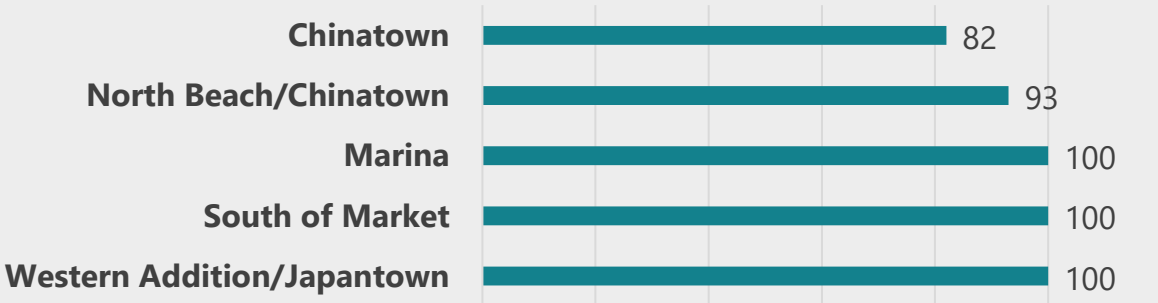
3 Data Visualization

Clustering of San Francisco Neighborhoods by Kmeans

There are 5 clusters in the San Francisco leaflet map using Folium library.

4 **Findings & Discussion**

- It is very interesting to observe that the most popular restaurants in Chinatown are Italian Restaurants, followed by Mexican restaurants.

- Chinese Restaurants, Italian Restaurants and Sushi Restaurants are the most popular restaurants in San Francisco.

- The most popular venue categories are coffee shop, pizza place and café.

- The top visited neighborhoods are:

  1. Western Addition/Japantown
  2. South of Market
  3. Marina
  4. North Beach/Chinatown
  5. Chinatown

4 **Findings & Discussion**

- If you want to explore popular coffee shops, you can go to the below neighborhoods:

    1. North Beach/Chinatown

    2. South of Market

    3. Hayes Valley/Tenderloin/North of Market

    4. Polk/Russian Hill (Nob Hill)

    5. Chinatown

- If you want to explore popular pizza places, you can go to the below neighborhoods:

    1. North Beach/Chinatown

    2. Inner Richmond

    3. Western Addition/Japantown

    4. Inner Mission/Bernal Heights

    5. Outer Richmond

4

Findings & Discussion

- If you want to explore popular cafes, you can go to the below neighborhoods:

  1. North Beach/Chinatown

  2. Outer Richmond

  3. Hayes Valley/Tenderloin/North of Market

  4. South of Market

  5. Chinatown

North Beach/Chinatown is the right neighborhood for you to explore coffee shops, pizza places and cafes.

5 Conclusion

- Accuracy of the models has room for improvement.

- Ideas include:

  1. Get the data on Restaurant price (XXUSD per pax).
  2. General review for Restaurant or other place.
  3. Transportation information such as bus stations and MRT stations