CAPSTONE PROJECT - BATTLE OF NEIGHBORHOODS

FINDING THE BEST AREA TO SET UP A SMALL BOUTIQUE CAFE IN MANHATTAN, NY

BACKGROUND /BUSINESS PROBLEM

- With over 3000 coffee shops in New York it can be said that New Yorkers love their coffee. Recently, MassiveHealth found that New Yorkers drink 6.7 times the amount of coffee consumed by the average denizen of any other US city.

- Factors to consider when choosing the location of this new business:
  1. Nearby Venues: Other cafes, restaurants, gyms, etc.
  2. Crime: Will employees be safe coming to/leaving work, will there be people visiting this area
  3. Nearby subway stations: a coffee shop near a subway station might attract more visitors
     In this project we will analyse the above factors to determine which area would be the best to open this new café. We will be looking at neighbourhoods in the Manhattan borough only.

DATA

- ## New York City Data

  JSON File - This includes each neighborhood, borough, latitude and longitude.

- ## New York Neighborhood Tabulation Data
  JSON File- This data was used to add the tabulation area to each of the datasets.

- ## New York City Crime Data
  Filtered to only include felony and misdemeanour crimes in Manhattan from 2019

- ## Subway Entrances Data
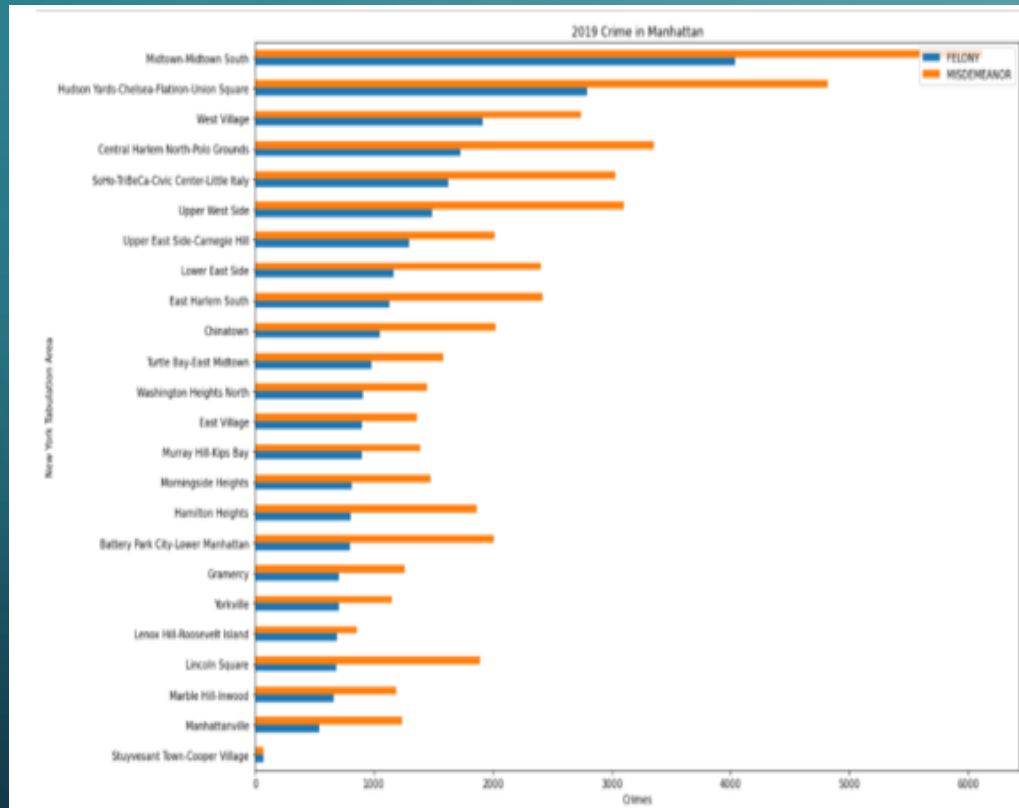 JSON File containing longitude and latitude of each subway entrance in Manhattan
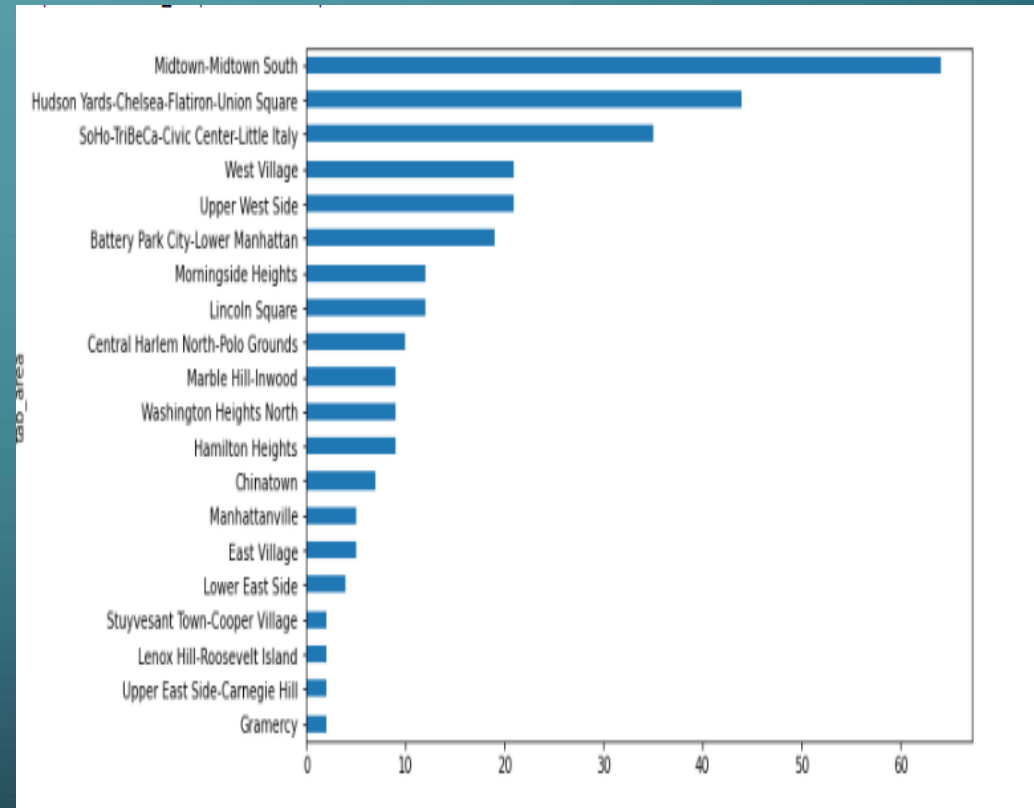
- ## Foursquare API Data
  Used to explore each neighborhood in Manhattan and venues nearby each of the coordinates in the New York City data.

EXPLORATORY ANALYSIS
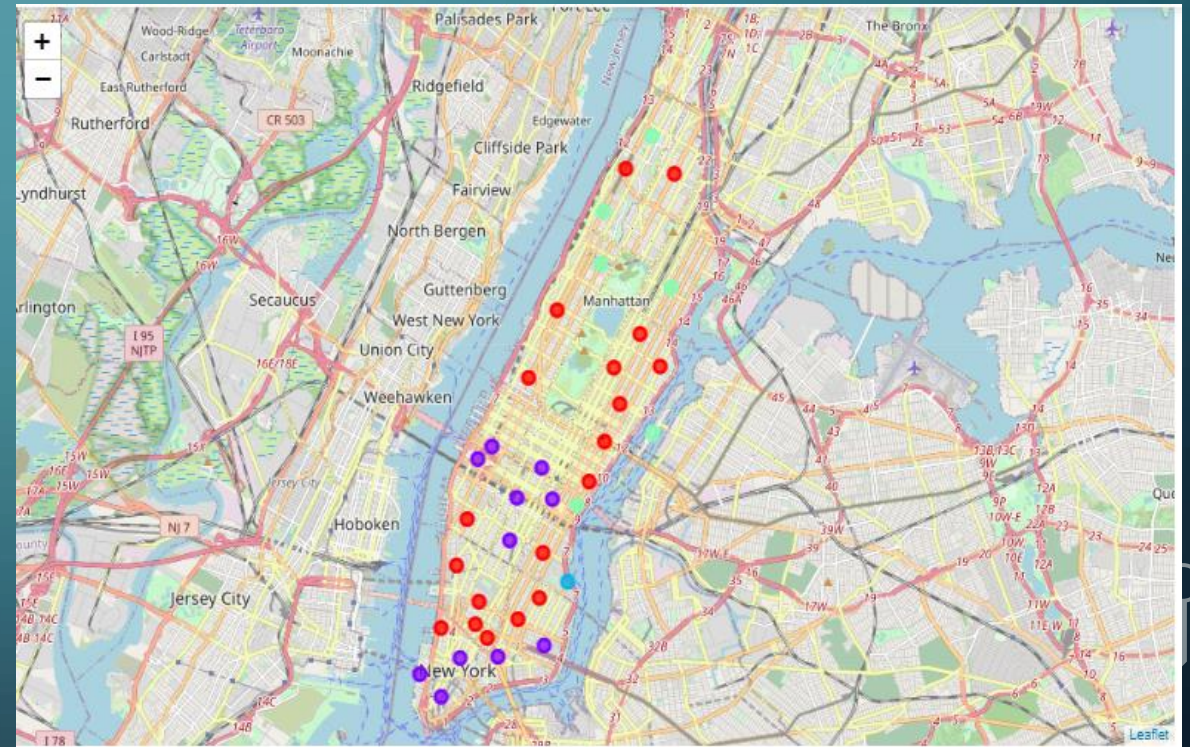
Crime per Tabulation Area

Subway Entrances per Tabulation Area

K-MEANS CLUSTERING

- **Cluster 1 – Restaurants/Coffee Shops** – Cluster 1 consisted of mainly Restaurants and Coffee Shops

- **Cluster 2 – Hotel cluster** – Cluster 2 consisted of hotels and restaurants/coffee shops again.

- **Cluster 3 – Tourism cluster** – There is only one neighborhood listed here which has a park and a boat/ferry which would indicate tourism.

- **Cluster 4 – international** – There is a diverse range of food options in this cluster.

- **Cluster 5** – There is only one neighborhood here again so it would be too difficult to decide on a name for this cluster.

CONCLUSIONS

- Analysis based on New York city neighborhood data, neighborhood tabulation data, crime data, subway entrances data and Foursquare API Venue data

- Battery Park City /Financial District Neighborhood

  1. hotels

  2. coffee shops

  3. Gyms

  4. low crime rates

  5. Multiple subway entrances