The Battle of Neighbourhoods

Business problem

New York is a Populated city. Customer is new to the New York City. He wants to explore the Queens and Manhattan Borough in New York City for his business.

New York city is very big and very populated city. Exploring city and finding the difference between Boroughs will be very difficult to the Customer.

Question considering the 2 Boroughs (Queens and Manhattan)

1. Difference between Boroughs?

2. Most common venue in both the Borough?

3. Most categorical neighbourhood in both the Borough?

4. Difference between borough based on categorical venues?

Customer find best solution to above questions is to compare the both the borough and find the answers for the questions. Comparing both Borough will help him to find out all the related information he wants to know.

Data Description

For this project we need the following data:

New York data sheet with Neighbourhood names, latitude, longitude and Download it from given link in week 3 assignments.

Description: This data set contains the required information. And we will use this data set to explore various neighbourhoods and borough of New York city.

API

Foursquare API: https://developer.foursquare.com/

Description: By using the foursquare api we will be able to explore the nearby venues of the different borough in New York city.

Folium Library

Description: used to create the map

WordCloud

Description: Used to visualise the words (names) which are most common.
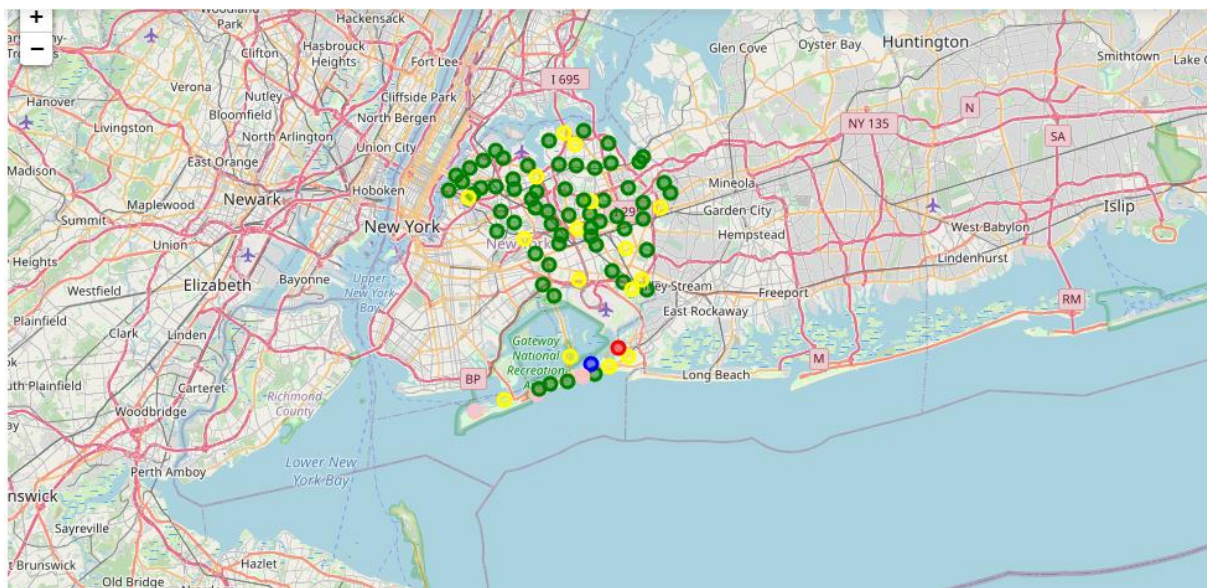
Business Solution

For this we need to explore Queens and Manhattan Boroughs in the New York City dataset. We will Use dataset given in the week 3 assignment to explore more about the boroughs.
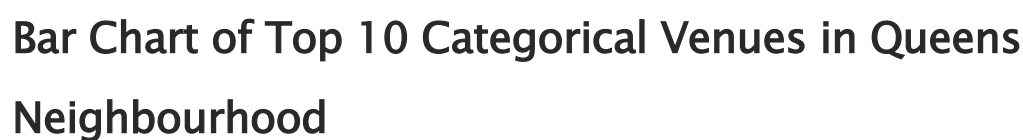
First we will do data cleaning from the New York dataset to proceed further. After this we will extract data for Queens Borough and Manhattan Borough from New York Datasets. We will get the latitude and longitude of both the Borough using Geocoder and used this latitude and longitude in Foursquare API to get the Nearby venues of the both Borough.

We will visualise data for comparison using Map, Word Cloud for better visualization and Also will compares bar charts to see which is most categorical Neighbourhoods of both the Boroughs.
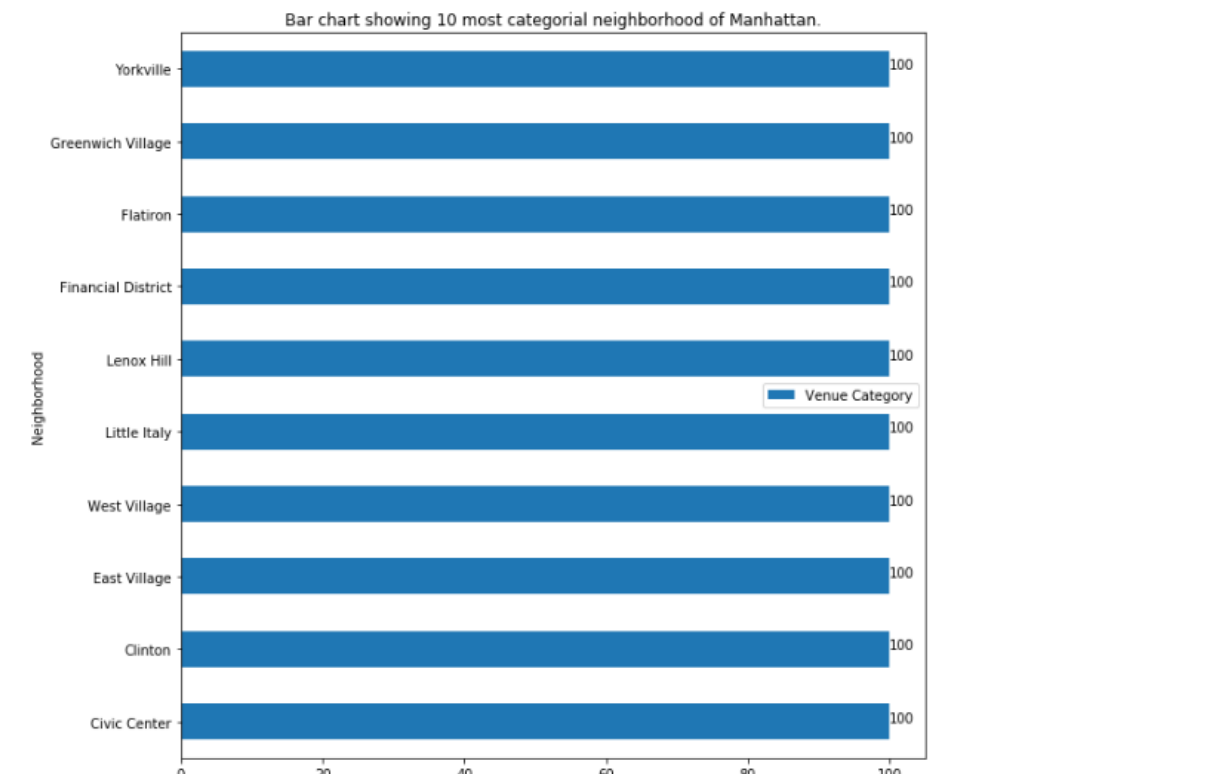
Segment and Cluster Map for Queens

Segment and Cluster Map for Manhattan

Word Cloud for Queens

Word Cloud for Manhattan

Bar Chart of Top 10 Categorical Venues in Queens Neighbourhood

Bar chart showing the most categorial neighborhood of Queens

Bar Chart of Top 10 Categorical Venues in Manhattan Neighbourhood

Bar chart showing 10 most categorial neighborhood of Manhattan.

Conclusion

From the above Cluster map and Word map we can say that the most common venues in the both the Boroughs Are Pizza Place, Coffee shops, Food restaurants, Pharmacy, bakery.

Difference we can see is Queen is having American and Chinese restaurants whereas in Manhattan we can see only Chinese restaurants are common. One more difference is we have donut shop in Manhattan but not in Queens.

Now according to the bar chart Queens has different number of categories in the top 10 neighbourhoods whereas in Manhattan we can see almost the top 10 are having all the same number of categories.