THE BATTLE OF NEIGHBORHOODS

Capstone Project

Introduction

- New York city review for restaurant setup

- Optimum location for new Restaurant business

- Business Problem :

    - Choice of first neighborhood to start restaurant business.

    - Easy to replicate.

    - Low competition -

    - Accessibility to farmer markets

- Success Criteria :

    - Best neighborhood which meets above criteria.

NEW YORK CITY - FACTS

- Most populous city in the United States

- It is diverse and is the financial capital of USA

- It is multicultural

- Provides lot of business opportunities

- Business friendly environment

- Attracted many different players into the market

- Global hub of business and commerce.

- The city is a major centre for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theatre, fashion, and the arts in the United States.

NEW YORK – BUSINESS ENVIRONMENT

- Market is highly competitive

- Highly developed city so cost of doing business is also one of the highest

- New business venture or expansion needs to be analysed carefully

- One should strategically targeting the market inorder to –

  -This will help in reduction of risk.

  -The Return on Investment will be reasonable.

DATA DESCIPTION-1

▶ Data 1 : Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

▶ This dataset exists for free on the web. Link to the dataset is :

https://geo.nyu.edu/catalog/nyu_2451_34572
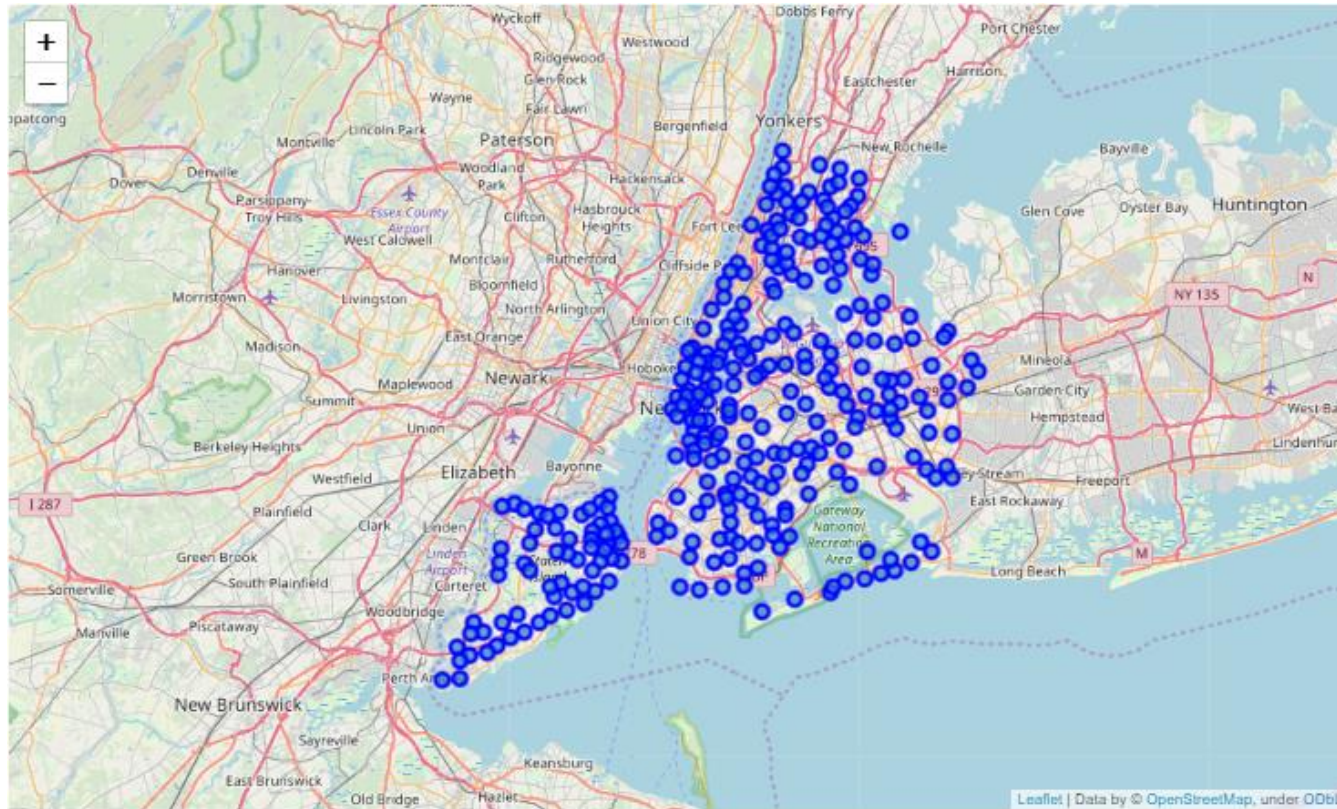
DATA DESCRIPTION - 2

► Data 2 : Farmers Markets data -

• https://data.cityofnewyork.us/dataset/DOHMH-Farmers-Markets-andFood-Boxes/8vwk-6iz2

• A farmers' market is often defined as a public site used by two or more local or regional producers for the direct sale of farm products to consumers. In addition to fresh fruits and vegetables, markets may sell dairy products, fish, meat, baked goods, and other minimally processed foods.
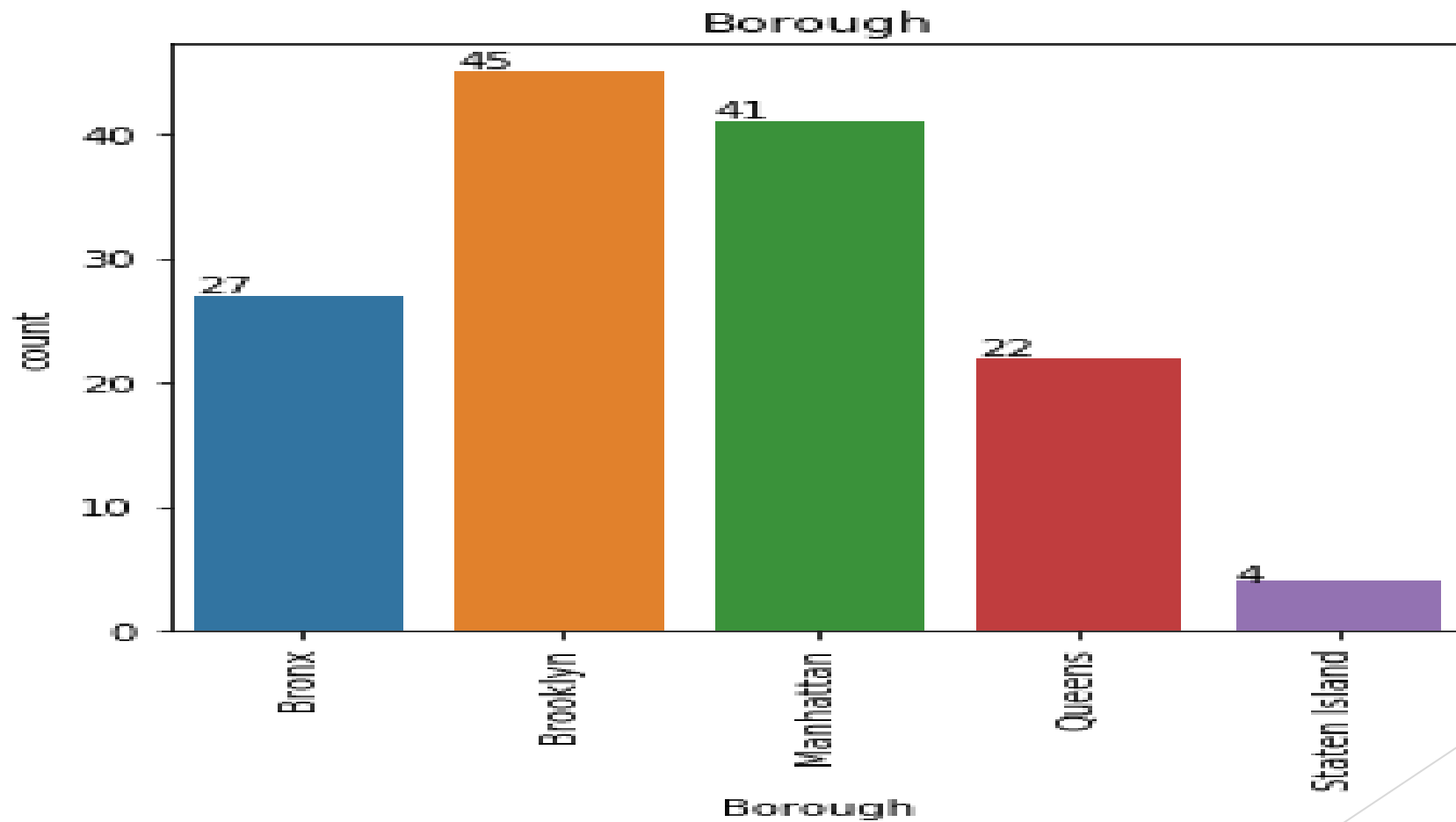
DATA DESCRIPTION - 3

- Data from foursquare.com Newyork city geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision venues information for each neighborhood.

- We will use the Foursquare API to explore neighborhoods in New York City.
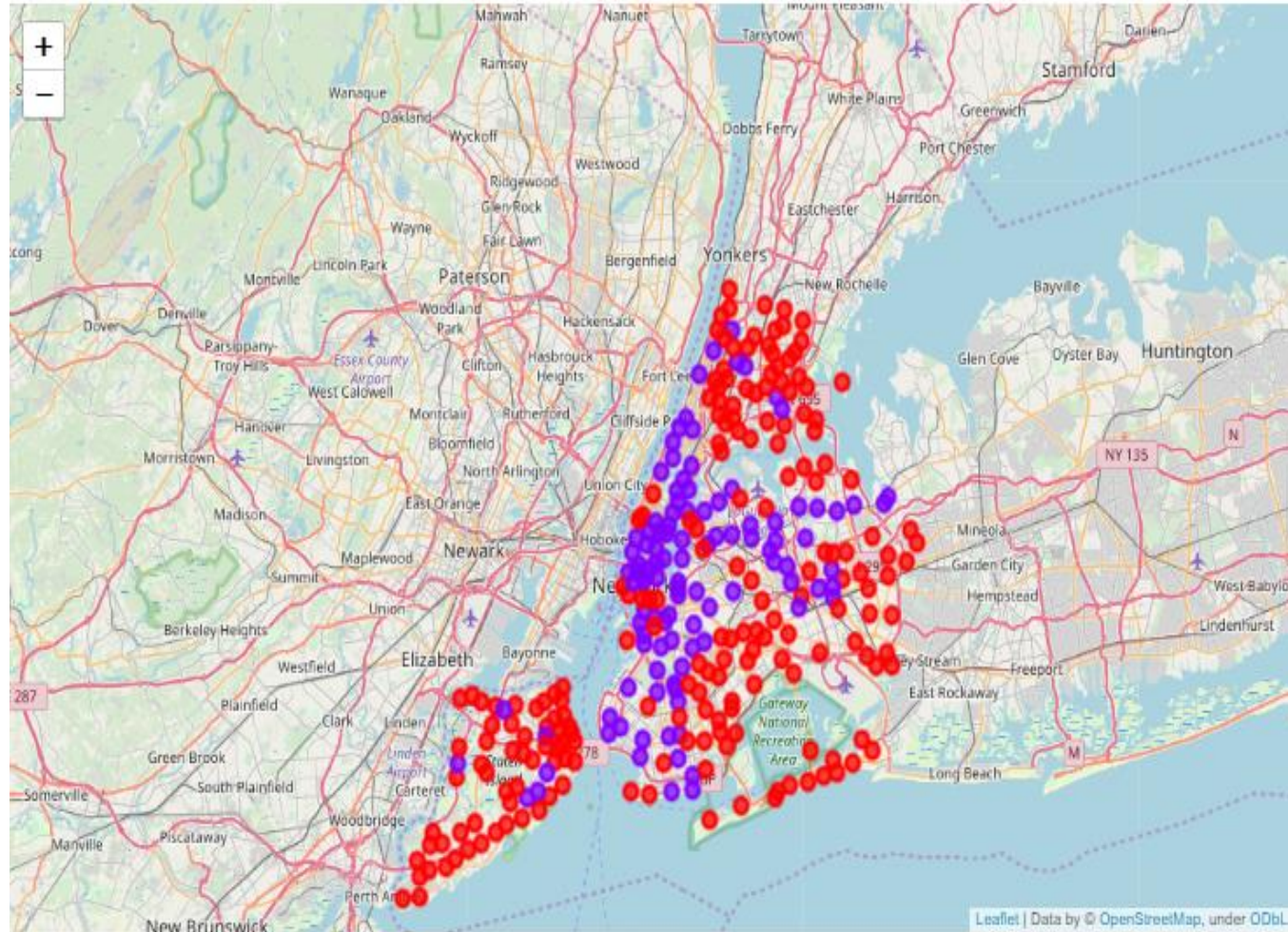
New York – Neighborhoods Visualization

Number of Farmer Markets By boroughs visualization

Map of farmer markets in New york

Clustering of Neighborhoods

- The cluster 0 is represented in red

- The cluster 1 is represented in blue

Clustering of Neighborhoods

▶ Cluster0 : K-means clustering shows that the market is not saturated.

▶ Cluster1 : K-means clustering shows that the markets are saturated. Number of restaurants are very high.

▶ There are a few untapped Neighborhoods where there is no market for restaurants

	Borough	Neighborhood	Latitude	Longitude	Total	Cluster_Labels
0	Bronx	Clason Point	40.806551	-73.854144	0	0
1	Staten Island	Todt Hill	40.597069	-74.111329	0	0
2	Staten Island	Port Ivory	40.639683	-74.174845	0	0
3	Staten Island	Rossville	40.549404	-74.215729	0	0
4	Staten Island	Bloomfield	40.605779	-74.187256	0	0

Conclusion

▶ Brooklyn and Manhattan has high concentration of restaurant business. Very competitive market. Bronx, Queens and Staten Island also has good number of restaurants but not as many as required. So this can be explored.

▶ Clason Point, Todt Hill, Port Ivory, Rossville, Bloomfield could be possible neighborhoods to setup a restaurant as there is no competition. Further analysis is required on this front by considering the demographics of these neighborhoods.

▶ The neighborhoods in the cluster 1 are saturated markets, i.e, the competition is high and also the demand for restaurants seems to be high. The neighborhoods in the cluster 0 market seem to be less saturated.

▶ The farmer markets seem to be closer to the neighborhoods in the Boroughs Brooklyn and Manhattan.