

The Battle of Neighborhoods



INTRODUCTION



Choosing the right place is key for restaurant business.



The place depends on lot of factors like

Population distribution
Population demographics
Transportation
Tourism etc.



The objective of the project is to determine the location to start a new restaurant and understand the rationale behind choosing that location.

Background

Racialcomposition		2010	1990	1970	1940
0	White	44.0%	52.3%	76.6%	93.6%
1	—Non-Hispanic	33.3%	43.2%	62.9%	92.0%
2	Black or African American	25.5%	28.7%	21.1%	6.1%
3	Hispanic or Latino (of any race)	28.6%	24.4%	16.2%	1.6%
4	Asian	12.7%	7.0%	1.2%	—

- New York city is the most populous in the United States (Wikipedia).
- Its population is widely diversified.
- It includes an array of international like Jewish, Bagels, Cheesecake, Hot dogs, knishes etc.
- Choosing a place to start a restaurant

is the key for the success of the business.

Data

- **Data 1:**
 - New York city has 5 boroughs- Brooklyn, Queens, Manhattan, The Bronx and Staten Island and 306 neighborhoods.
 - In order to cluster the neighborhoods we need information of all the 5 boroughs and the neighborhoods present in each borough along with latitude and longitude coordinates of each neighborhood.
 - Data is available for free at: https://geo.nyu.edu/catalog/nyu_2451_34572

Data

- **Data 2:**
 - Second data which will be used is the DOHMH Farmers Markets and Food Boxes dataset.
 - In this we will be using the data of Farmers Markets. <https://data.cityofnewyork.us/dataset/DOHMH-Farmers-Markets-and-Food-Boxes/8vwk-6iz2>

Data

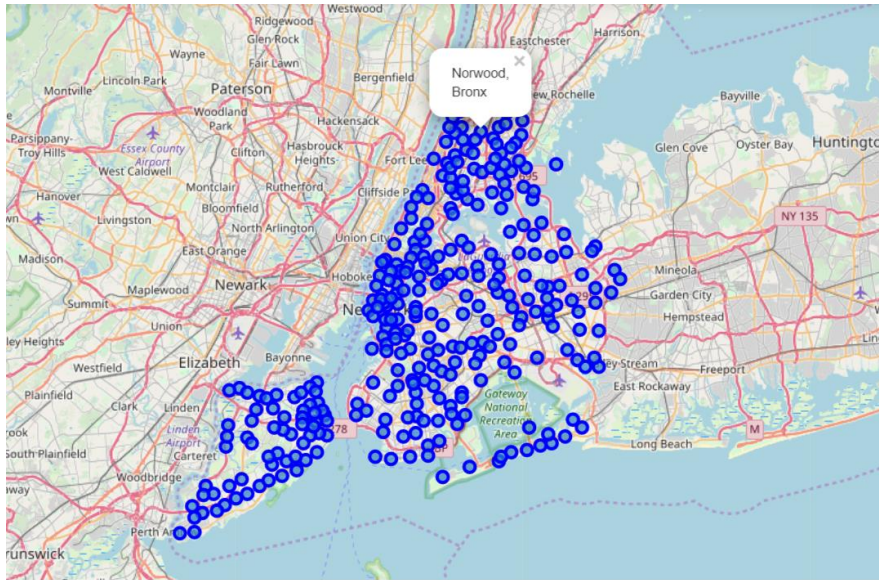
- **Data 3:**
 - For the below analysis we will get data from wikipedia as given below :
- New York Population New York City
Demographics Cuisine of New York city.
 - https://en.wikipedia.org/wiki/New_York_City
 - https://en.wikipedia.org/wiki/Economy_of_New_York_City
 - https://en.wikipedia.org/wiki/Portal:New_York_City
 - https://en.wikipedia.org/wiki/Cuisine_of_New_York_City
 - https://en.wikipedia.org/wiki/List_of_Michelin_starred_restaurants_in_New_York_City



Data

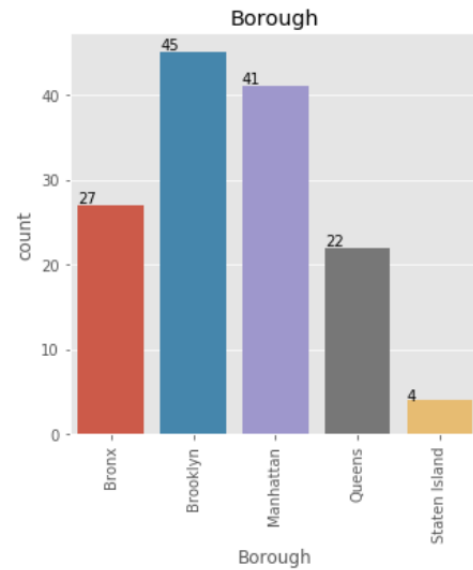
- **Data 4:** Newyork city geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision venues information for each neighborhood. We will use the Foursquare API to explore neighborhoods in New York City.

Data Analysis



- Distribution of neighborhoods in New York.

Data Analysis



- Distribution of Farmer's market in each neighborhood in New York.

Data Analysis

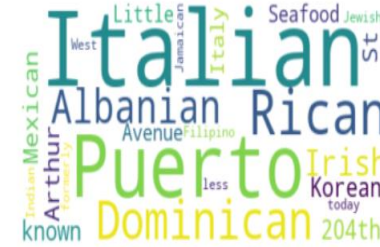


- Farmer's markets in New York are distributed as shown in the figure.

Data Analysis

- Cuisines popular in each neighborhood is shown in the figures.

Borough: The Bronx



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Borough: Queens



Borough: Brooklyn



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Borough: Staten Island

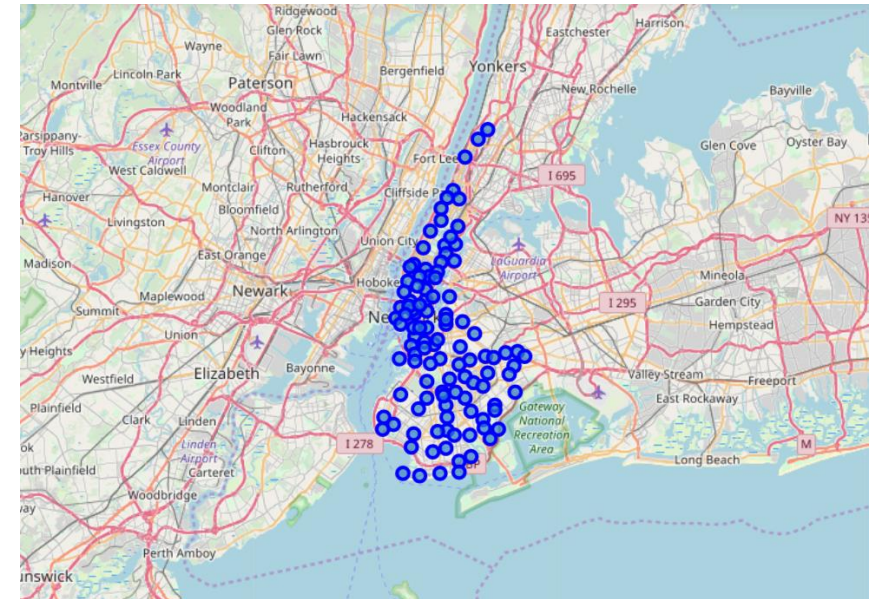
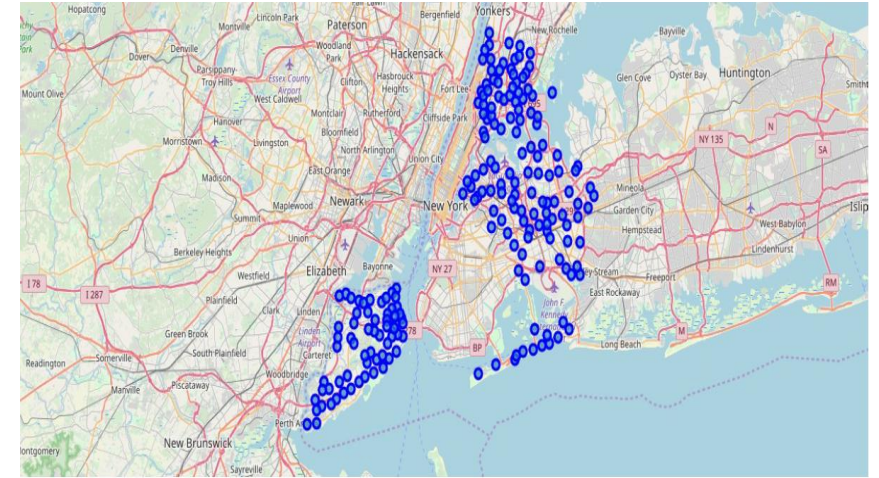


Borough: Manhattan



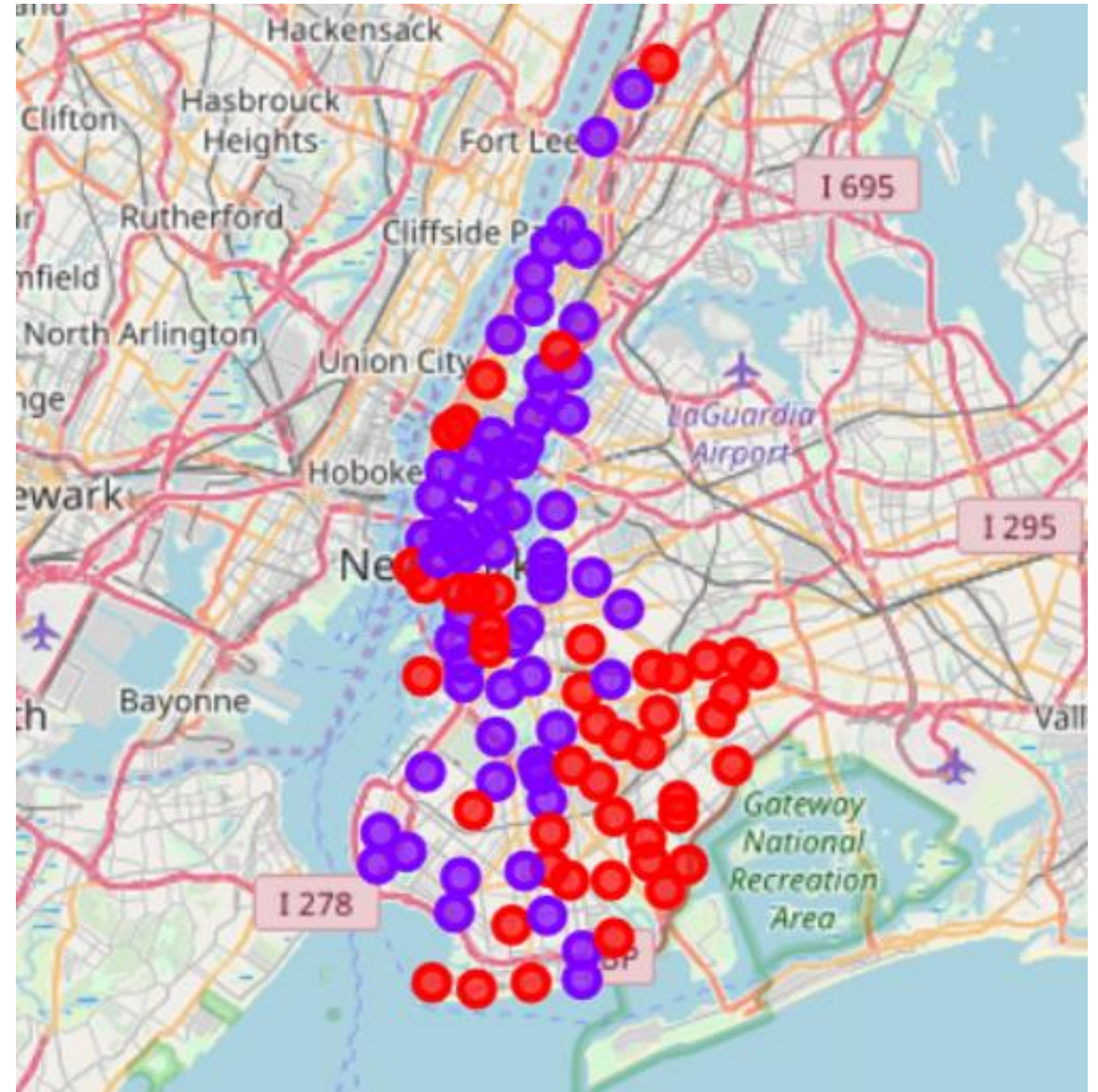
Data Analysis

- Venues in Brooklyn, Manhattan and Bronx, Queens and Staten Island are as below respectively:



Results

- **Brooklyn & Manhattan:**
- In the Map Visualization, we can see the different types of clusters created by using K-Means for Brooklyn & Manhattan.
- Cluster 0: The Total and Total Sum of cluster0 has smallest value. It shows that the market is not saturated.
- Cluster 1: The Total and Total Sum of cluster1 has highest value. It shows that the markets are
- saturated. Number of restaurants are very high.
- There are no untapped neighborhoods in Brooklyn and Manhattan.



Results cont..

- **Bronx, Queens and Staten Island:**
- In the below Map Visualization, we can see the different types of clusters created by using K-Means for Bronx, Queens and Staten Island.
- Cluster 0: The Total and Total Sum of cluster0 has smallest value. It shows that the market is not
- saturated. There are untapped neighborhoods.
- Cluster 1: The Total and Total Sum of cluster1 has highest value. It shows that the markets are
- saturated. Number of restaurants are very high.



Discussion

Farmers markets could be increased in Bronx, Queens and Staten Island.

Various countries cuisines can be explored in Bronx, Queens and Staten Island.

Wide variety of cuisines from different countries are available in Manhattan and Brooklyn. A restaurant with great cuisines would be a good choice.

Conclusion

Brooklyn and Manhattan have very competitive market with high concentration of restaurant business.

Bronx, Queens and Staten Island is not very competitive but has good number of restaurants. So, this can be explored.

From the neighborhood data or restaurant types identified like Indian Restaurants can be checked. A venue with low competition can be of low risk.

THANK YOU..