



Analysis of neighborhoods of New York City

NEW YORK CITY



Introduction

An X Company desires to launch a restaurant business

Best location for new restaurant Business

Business problem

Choice of the neighborhood

High demand

Low competition

Choice of menu

New York City

The most populous city in the United States

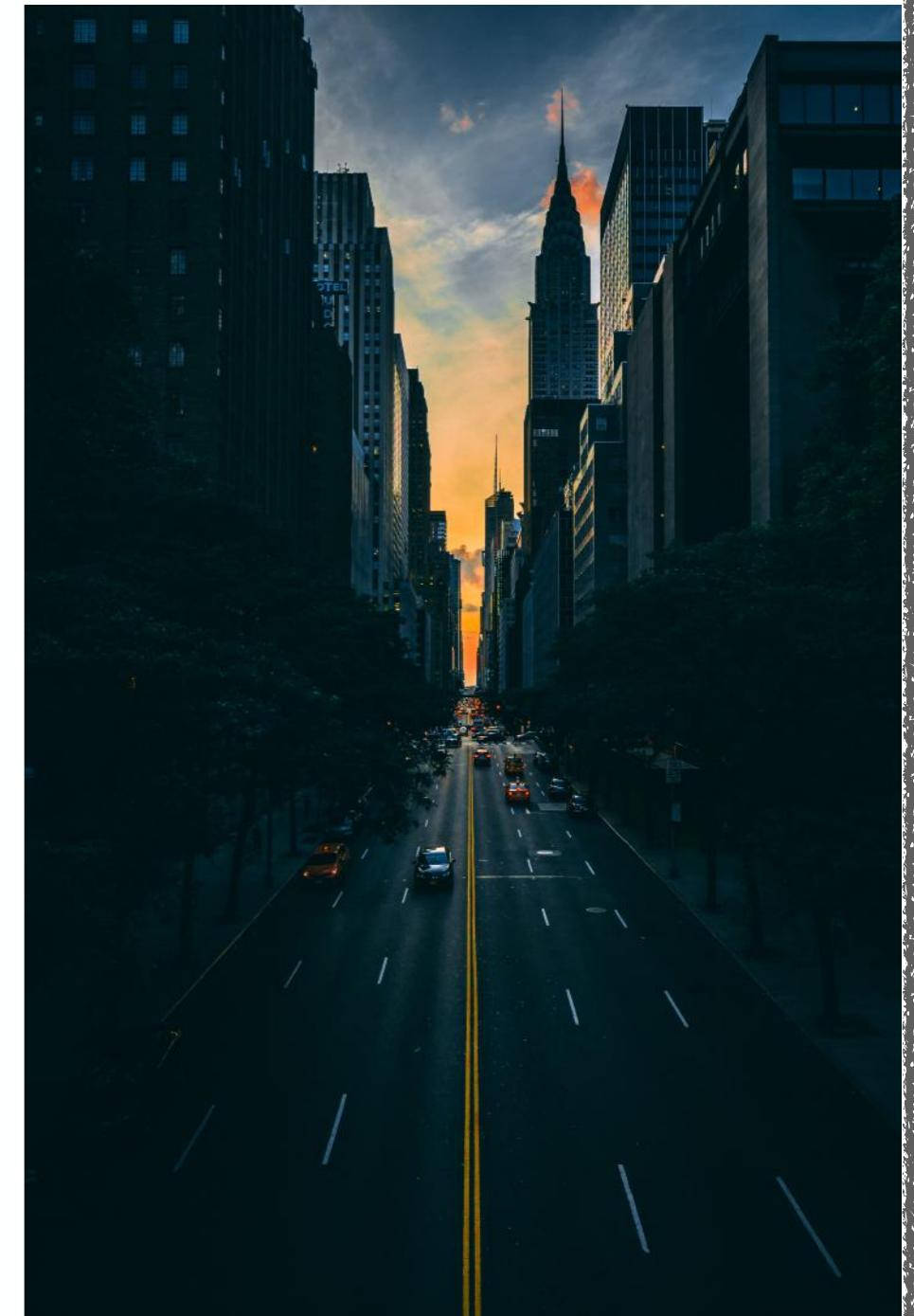
It is multicultural

Attracts many players in the market

Global hub of business and commerce

Market highly competitive

New business venture needs to be analyzed carefully



Cuisine in New York City

The food culture includes International cuisines influenced by the city's immigrants.
(Central and eastern European , Italian , Irish,Jewish, Asian ans middle eastern foods..)

The city is home to « nearly one thousand of the finest and most diverse haute cuisine restaurants in the world », according to Michelin.

Thus, to survive, it is essential to strategically plan



Type of data needed to choose the best location

New York City demographics & population

Venues nearby

Wholesale markets nearby

Saturated markets

Untapped markets

Menu of the competitors

Segmentation of boroughs

Data description

- 1. The dataset that contains neighborhoods of the 5 boroughs of the city, as well as the latitude and longitude coordinates of each neighborhood.

https://geo.nyu.edu/catalog/nyu_2451_34572

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

Data description

2. Farmers markets Data

	FacilityName	Service Category	Service Type	Address	Address 2	Borough	ZipCode	Latitude	Longitude	AdditionalInfo	StartDa
0	Inwood Park Greenmarket	Farmers Markets and Food Boxes	Farmers Markets	Isham St bet Seaman & Cooper	NaN	Manhattan	10034	40.869009	-73.920320	Open year-round	NaN
1	82nd Street Greenmarket	Farmers Markets and Food Boxes	Farmers Markets	82nd St bet 1st & York Aves	NaN	Manhattan	10028	40.773448	-73.948954	Open year-round	NaN
2	1 Centre Street	Farmers Markets and Food Boxes	Food Boxes	1 Centre Street	South Building, 9th Floor	Manhattan	11101	40.713028	-74.003753	Open year-round	NaN
3	125th Street Farmers Market	Farmers Markets and Food Boxes	Farmers Markets	125th St & Adam Clayton Powell Jr Blvd	NaN	Manhattan	10027	40.808981	-73.948327	Market open dates: 6/13/2017 to 11/21/2017	06/13/2017
4	170 Farm Stand	Farmers Markets and Food Boxes	Farmers Markets	170th St & Townsend Ave	NaN	Bronx	10452	40.840095	-73.916827	Market open dates: 7/5/2017 to 11/22/2017	07/05/2017

Data description

3. From wikipedia pages :

- Demographics & population of the city
- Cuisine of the city

	Racial composition	2010[237]	1990[239]	1970[239]	1940[239]
0	White	44.0%	52.3%	76.6%	93.6%\n
1	— Non-Hispanic	33.3%	43.2%	62.9%[240]	92.0%\n
2	Black or African American	25.5%	28.7%	21.1%	6.1%\n
3	Hispanic or Latino (of any race)	28.6%	24.4%	16.2%[240]	1.6%\n
4	Asian	12.7%	7.0%	1.2%	—\n

Data description

4. Data from foursquare.com

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Marble Hill	40.876551	-73.91066	Bikram Yoga	40.876844	-73.906204	Yoga Studio
1	Marble Hill	40.876551	-73.91066	Arturo's	40.874412	-73.910271	Pizza Place
2	Marble Hill	40.876551	-73.91066	Tibbett Diner	40.880404	-73.908937	Diner
3	Marble Hill	40.876551	-73.91066	Sam's Pizza	40.879435	-73.905859	Pizza Place
4	Marble Hill	40.876551	-73.91066	Starbucks	40.877531	-73.905582	Coffee Shop

Approach

We will have two sections :

1st : Clustering of Brooklyn and Manhattan

2nd : Clustering of Bronx, Queens and Staten Island

Only restaurant data is filtered from foursquare.com venues data

Methodology

We used the Foursquare API data to explore neighborhoods in New York City

We used the geographical coordinates of each neighborhood from foursquare API calls , we can get top 200 venues in a radius of 1000 meters

We did this in two sections :

1st : Brooklyn and Manhattan

2nd : Bronx, Queens and Staten Island

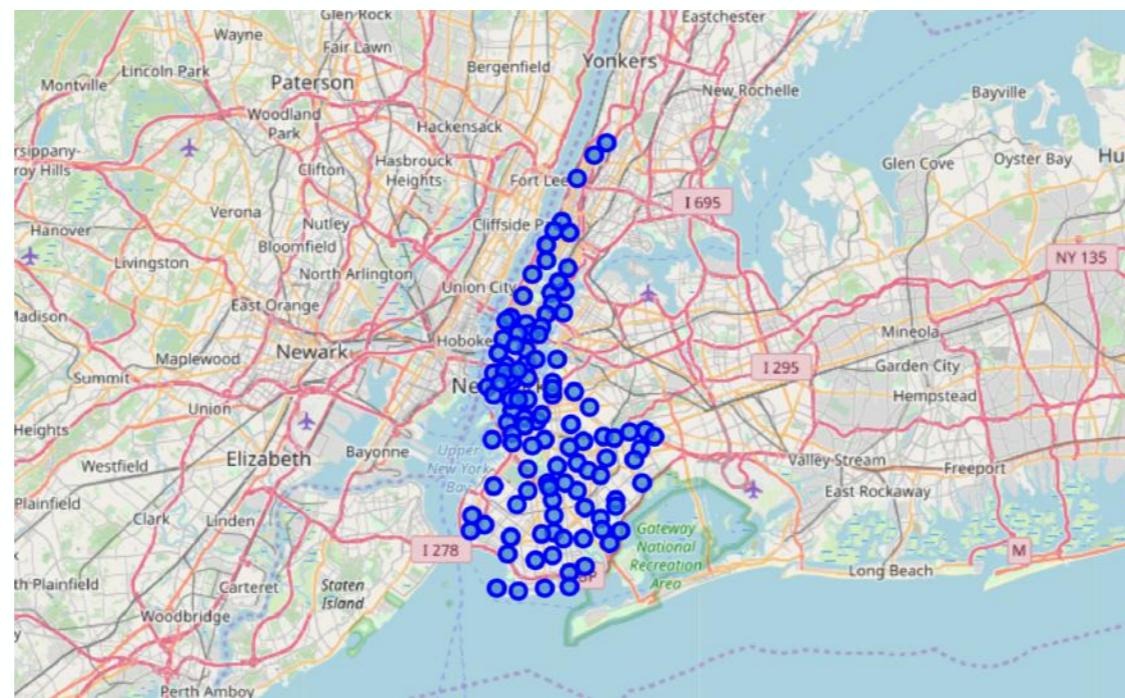
Methodology

Section 1 : Brooklyn and Manhattan

Brooklyn and Manhattan Venues data

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Brooklyn	Bay Ridge	40.625801	-74.030621
2	Brooklyn	Bensonhurst	40.611009	-73.995180
3	Brooklyn	Sunset Park	40.645103	-74.010316
4	Brooklyn	Greenpoint	40.730201	-73.954241

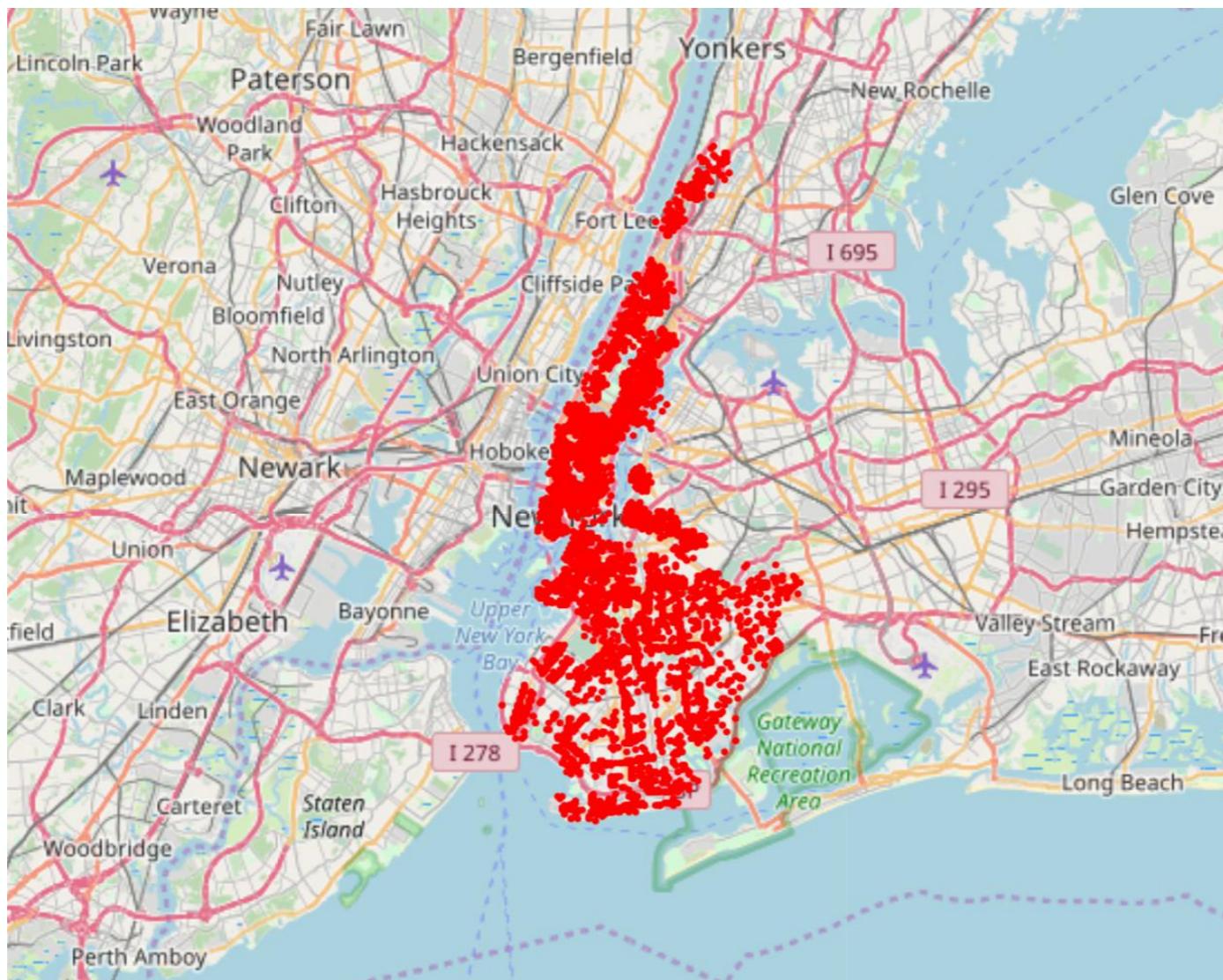
Brooklyn and Manhattan Visualization



Methodology

Section 1 : Brooklyn and Manhattan

Dataframe has 9708 venues, and 397 unique venue types.



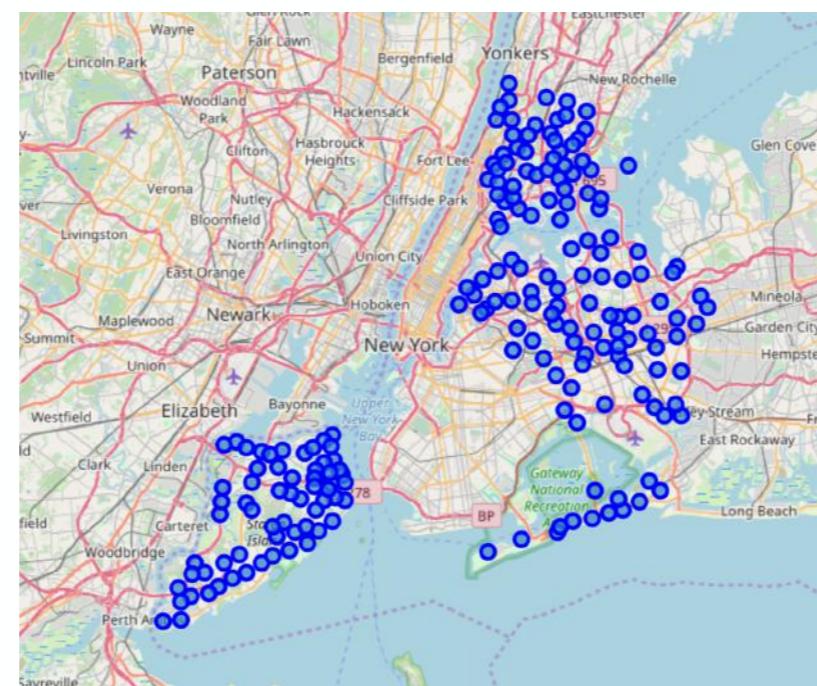
Methodology

Section 2 : Bronx, Queens and Staten Island

Bronx, Queens and Staten Island Venues data

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
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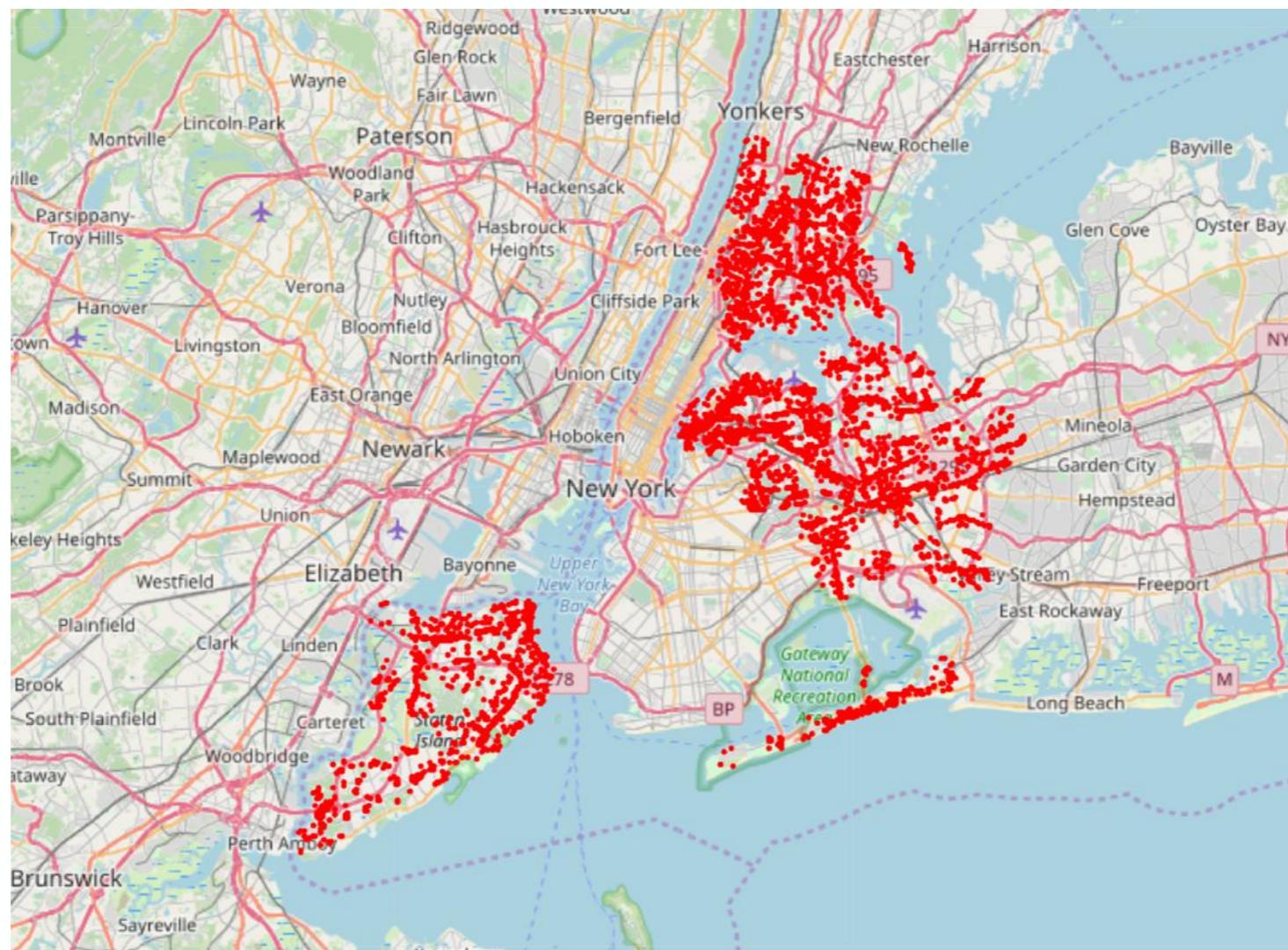
Bronx, Queens and Staten Island Visualization



Methodology

Section 2 : Bronx, Queens and Staten Island

Dataframe has 10805 venues, and 387 unique venue types.

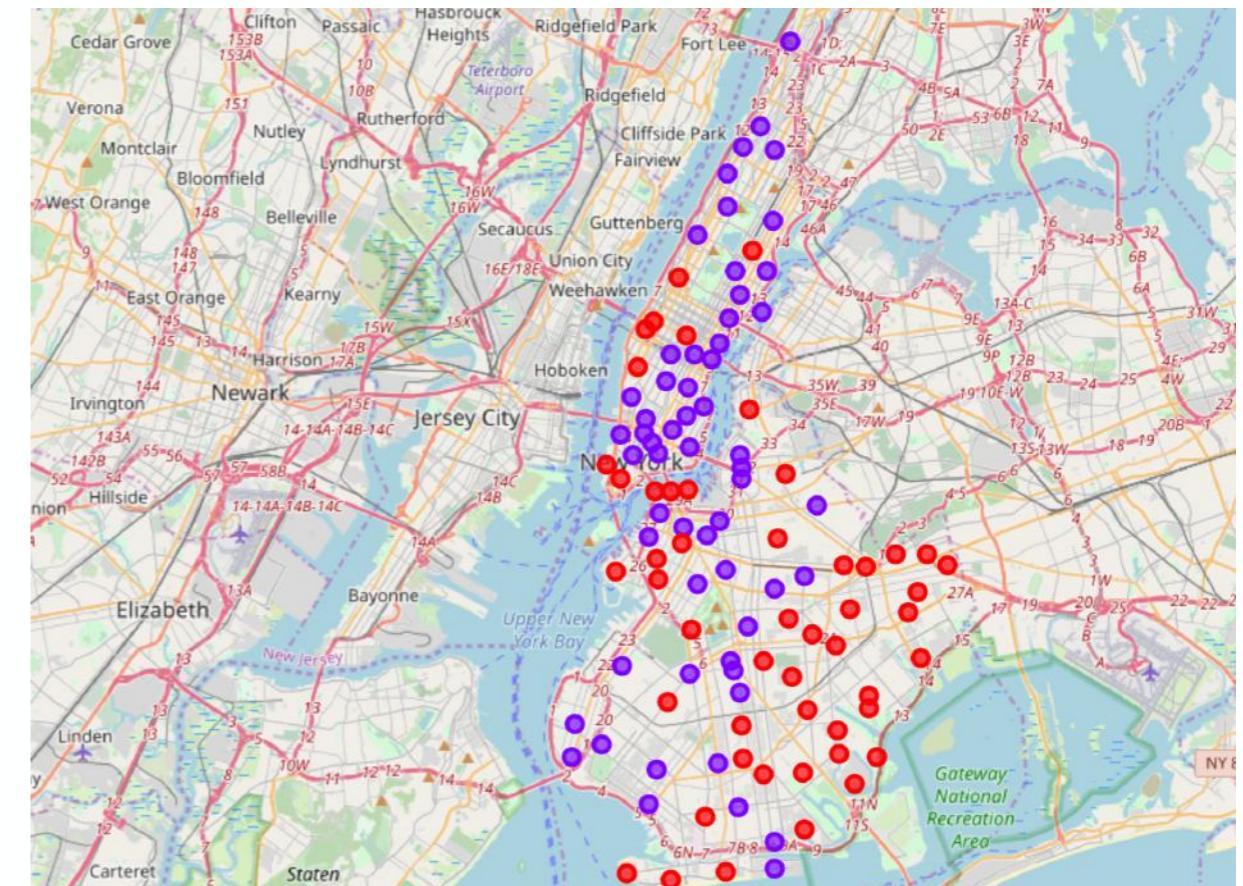


Results

Section 1 : Brooklyn and Manhattan

Cluster 0 : the market is not saturated

Cluster 1 : Lot of competition,
Saturated neighborhoods.

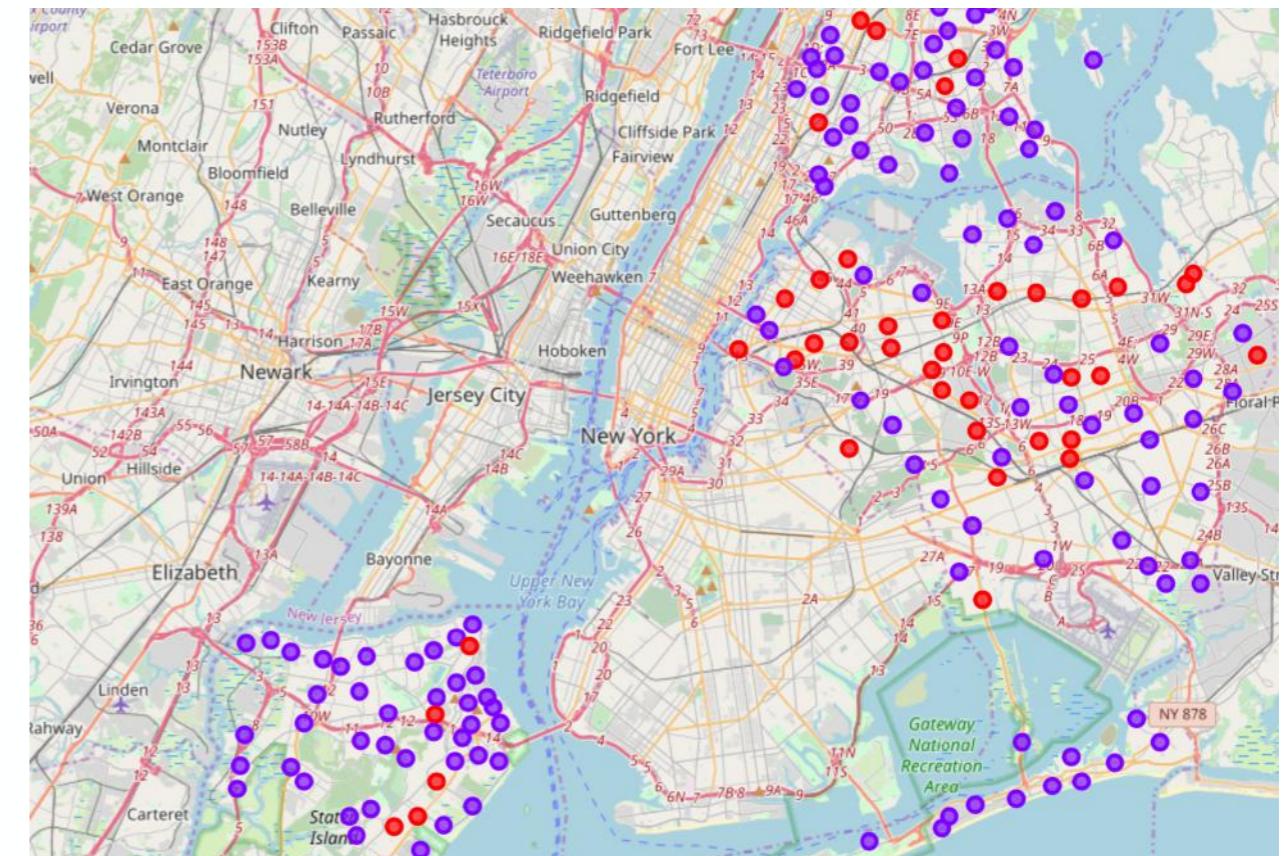


Results

Section 2 : Bronx, Queens and Staten Island

Cluster 0 : there are untapped markets,
the market is not saturated

Cluster 1 : lot of competition,
Saturated neighborhoods



Discussion

In Manhattan and Brooklyn restaurants, cuisines of many countries are part of their Menu. Risk can be taken with great menu on board.

Scope to explore cuisines of various countries in Bronx, Queens and Staten Island.

Possibility to increase Farmers markets, in Bronx, Queens and Staten Island.



Conclusion

Brooklyn and Manhattan have high concentration of restaurant businesses; So it's a very competitive market.

Bronx, Queens and Staten Island have god number of restaurants too , but not too many. Thus, it can be explored.

