

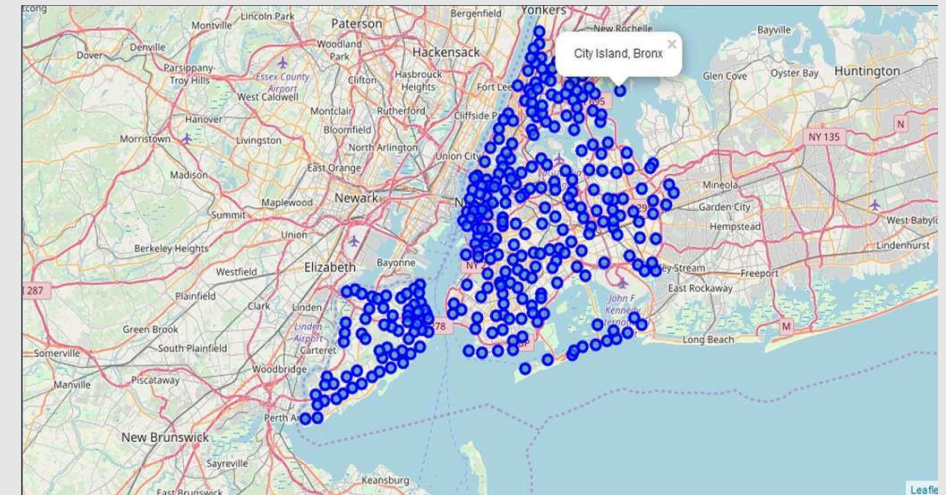


APPLIED DATA SCIENCE PROJECT – BATTLE OF THE NEIGHBORHOODS

Opening a restaurant in New York

Introduction

- Business Problem :
 - Choice of first neighborhood to start restaurant business
 - Needs to have low competition, high demand, access to produces.
- Success Criteria :
 - Present the best Borough which fits the above criteria for market entry



New York City restaurant market

- 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 analyzed carefully
- One should strategically target the market in order to:
 - Reduce risk
 - Be able to have reasonable return on their investment

Cuisine in New York City

The City of New York is famous for its excellent cuisine. Its food culture includes an array of international cuisines influenced by the city's immigrant history.

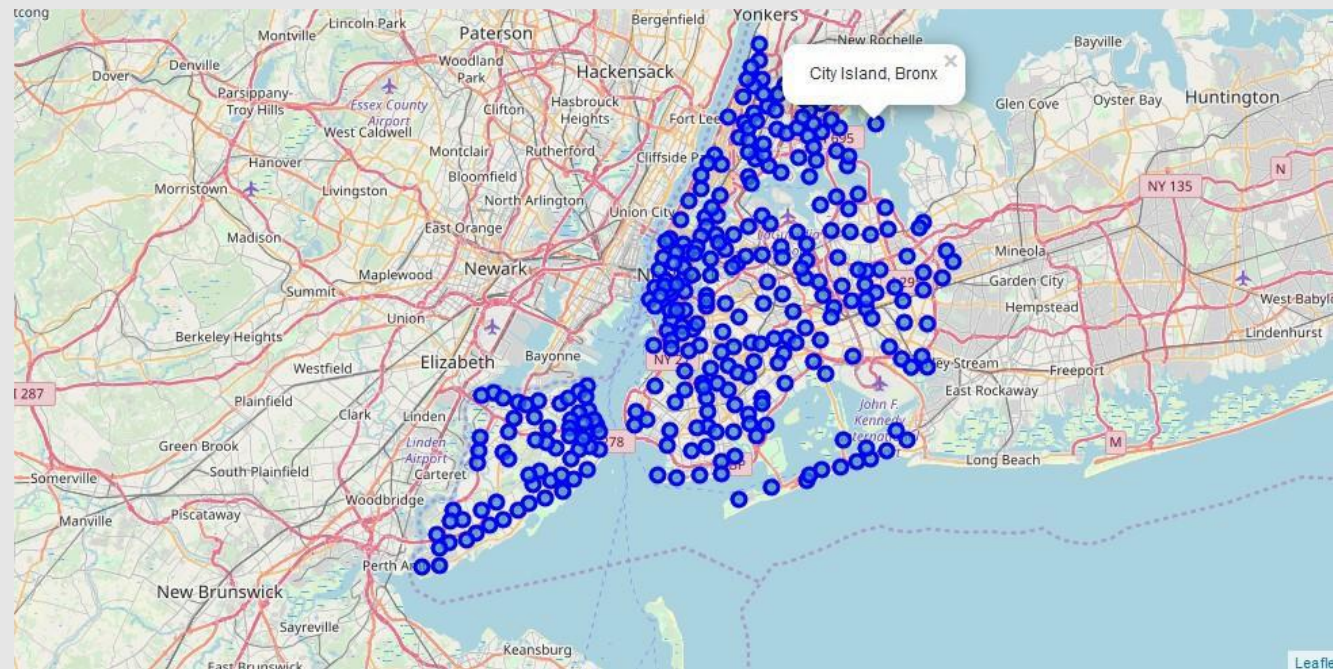
- Central and Eastern European immigrants, especially Jewish immigrants - bagels, cheesecake, hot dogs, knishes, and delicatessens
- Italian immigrants - New York-style pizza and Italian cuisine
- Jewish immigrants and Irish immigrants - pastrami and corned beef
- Chinese and other Asian restaurants, sandwich joints, trattorias, diners, and coffeehouses are ubiquitous throughout the city
- Mobile food vendors - Some 4,000 licensed by the city
- Middle Eastern foods such as falafel and kebabs examples of modern New York street food
- Famous for fine dining Michelin starred restaurants. The city is home to "nearly one thousand of the finest and most diverse haute cuisine restaurants in the world", according to Michelin.
- So it is evident that to survive in such competitive market it is very important to strategically plan.

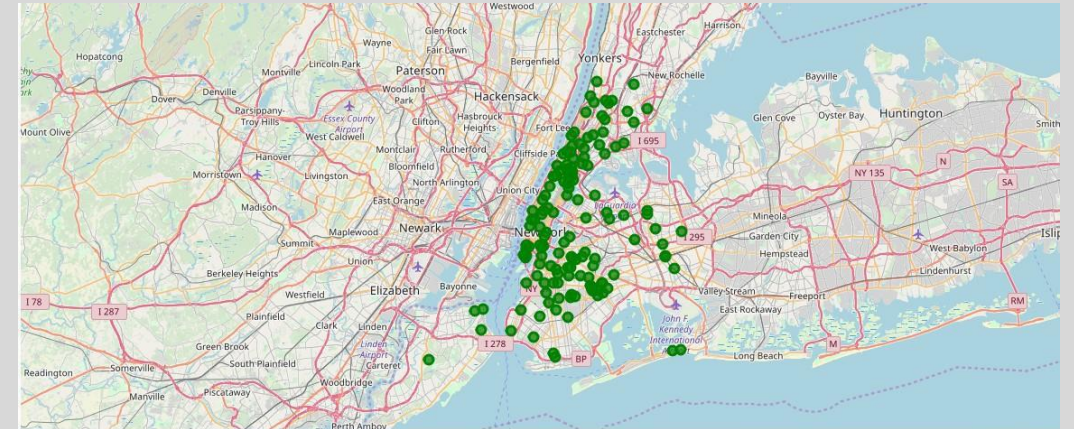
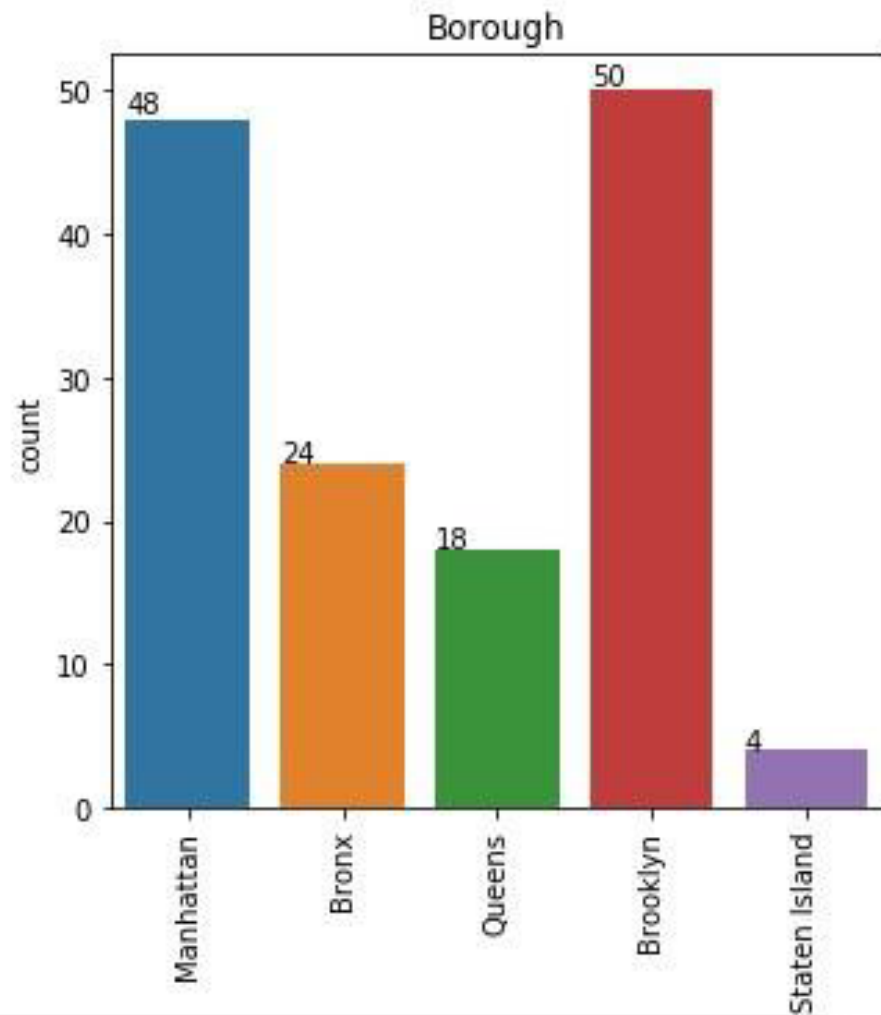
Factors to consider when entering this Market

- New York Population
- New York City Demographics
- Access to produces – farmer markets nearby?
- Location of competition? (Foursquare venues)
- Cuisine served / Menu of the competitors
- Segmentation of the Borough
- Untapped markets
- Market saturation

New York city Boroughs, neighborhoods and geographical location

- In total there are 5 Boroughs
- In these Boroughs there are 306 neighborhoods





Farmer markets

- New York has a high concentration of farmer markets around Manhattan and Brooklyn area.
- Other areas have less Farmer Markets

Demographics

- New York city has a wide variety of different demographics
- Manhattan has the highest density of population
- Brooklyn has the highest population
- Queens is geographically the largest

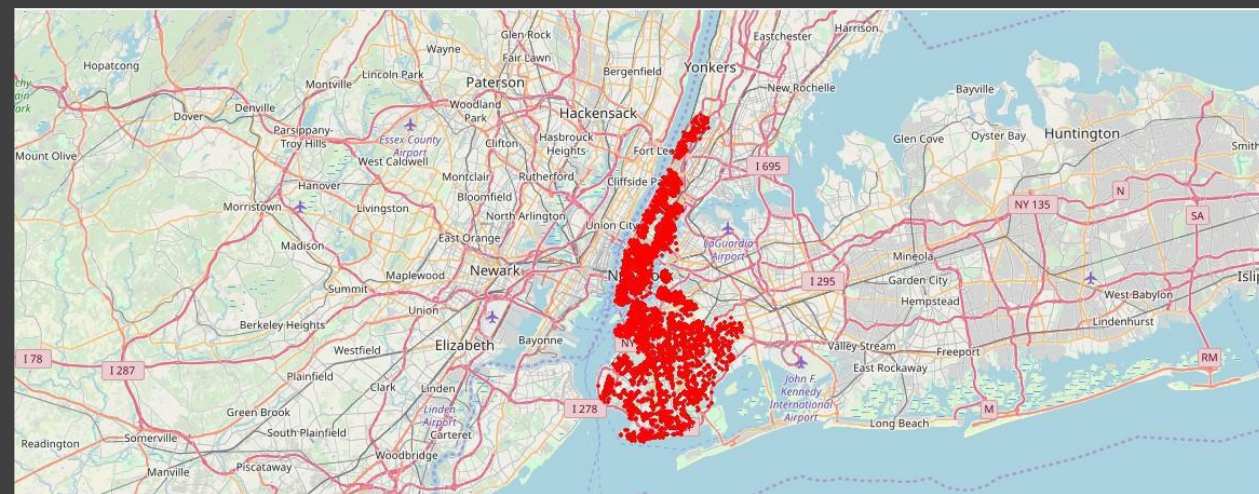
Racialcomposition		2010	1990	1970	1940
0	White	44.0%	52.3%	76.6%	93.6%
1	—Non-Hispanic	33.3%	43.2%	62.9%	92.0%
2	Black or African American	25.5%	28.7%	21.1%	6.1%
3	Hispanic or Latino (of any race)	28.6%	24.4%	16.2%	1.6%
4	Asian	12.7%	7.0%	1.2%	—

	Borough	County	Estimate_2017	square_miles	square_km	persons_sq_mi	persons_sq_km
0	Manhattan	New York	1,664,727	22.83	59.13	72,033	27,826
1	The Bronx	Bronx	1,471,160	42.10	109.04	34,653	13,231
2	Brooklyn	Kings	2,648,771	70.82	183.42	37,137	14,649
3	Queens	Queens	2,358,582	108.53	281.09	21,460	8,354
4	Staten Island	Richmond	479,458	58.37	151.18	8,112	3,132
5		City of New York	8,622,698	302.64	783.83	28,188	10,947
6		State of New York	19,849,399	47,214	122,284	416.4	159

Further data segmentation decision

- Based on Data and prevalence of Brooklyn and Manhattan being the most populated and being the center of New York, it was decided to segment the data into two areas.
 1. Brooklyn and Manhattan
 2. Staten Island, Bronx and Queens

Brooklyn and Manhattan



Bronx, Staten Island and Queens



FOURSQUARE VENUES

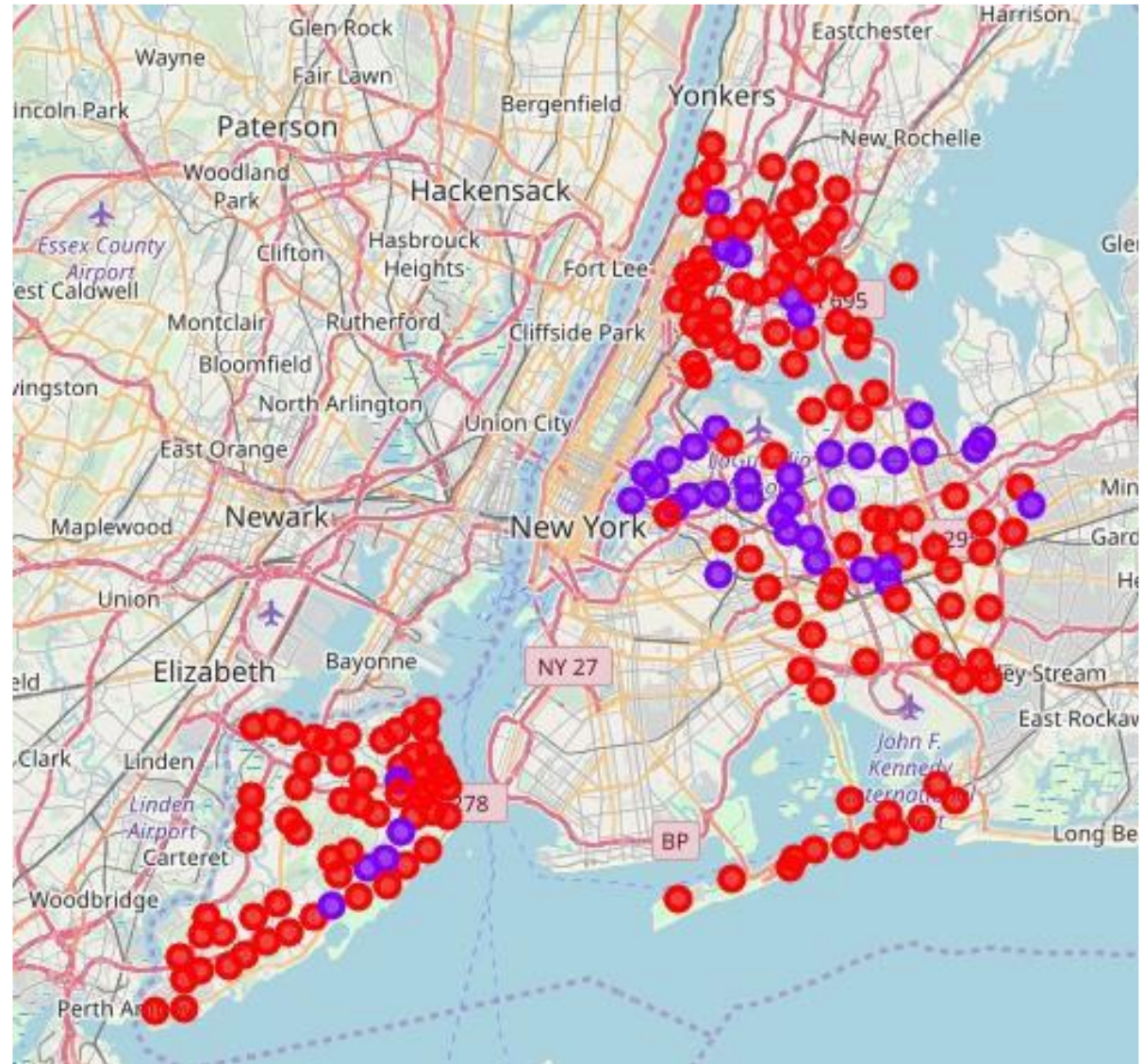
Results – Brooklyn and Manhattan

- Based on Cluster 0 and Cluster1, there is a very high number of restaurants in these Boroughs which leads to a conclusion that the market is highly saturated



Results – Bronx, Queens, Staten Island

- Based on the results, there is a high number of restaurants in Staten Island and Bronx area
- Queens has a lower volume of restaurants which shows that the market is not as saturated.
- There is room to explore to place a restaurant in Bronx, Queens or Staten Island



Discussion

- The market in Brooklyn and Manhattan is highly saturated when compared to Bronx, Queens or Staten island.
- There is scope to explore cuisines of various countries in Bronx, Queens and Staten Island.
- In Manhattan and Brooklyn restaurants of cuisines of many countries are available, so it shows that there is demand for these cuisines.
- Manhattan and Brooklyn is most saturated due to being the most populous and dens areas of New York. Restaurants in this area are in closer proximity to potential customers than in other areas.

Conclusion

- The analysis performed in this data science project is very limited in scope and barely scratches the surface of the complexity of entering such a competitive market as restaurant business in New York.
- The advice would be to gather further data and explore possibility of opening a restaurant in this area as there might be market share still available.
- Further analysis is needed to identify which restaurant type and cuisine category would lead to the lowest risk and competition. Perhaps with more analysis and deeper understanding of the situation it would be possible to enter the market in Manhattan or Brooklyn with more robust research.