

BATTLE OF NEIGHBORHOOD

Exploration in New York's Brooklyn & Manhattan

INTRODUCTION

- New York City Exploration
- Optimal Location Hunt for ABC Company.

Business Problem:

Choice of Neighbourhood where

- i. Low Competetion
- ii. Easy to Replicate
- iii. High Demand

NEW YORK CITY FACTS

The City of New York, is the most populous city in the United States. It is diverse and is the financial capital of USA. It is multicultural. It provides lot of business oppourtunities and business friendly environment. It has attracted many different players into the market. It is a global hub of business and commerce. The city is a major center for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theater, fashion, and the arts in the United States.

IMMIGRANTS AND CHOICES

- ❑ Indian immigrants –Dhosa, Thali, Roti ,Biriyanis.
- ❑ Japanese –Athos.
- ❑ Central and Eastern European immigrants, - bagels, cheesecake, hot dogs, knishes, and delicatessens
- ❑ Italian immigrants - New York-style pizza and Italian cuisine
- ❑ Chinese and other Asian restaurants, sandwich, 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
- ❑ It is famous for not just Pizzerias, Cafe's but also 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.

CONSIDERATIONS

1. New York Population
2. New York City Demographics
3. Are there any Farmers Markets, Wholesale markets etc nearby so that the ingredients can be purchased fresh to maintain quality and cost?
4. Are there any venues like College, Entertainment zones, Parks etc nearby where floating population is high increasing the visitors.
5. Who are the competitors in that location?
6. Cuisine served / Menu of the competitors .
7. Segmentation of the Borough

DATA DESCRIPTION 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

	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

Farmer Market Data :

	FacilityName	Service Category	Service_Type	Address	Address 2	Borough	ZipCode	Latitude	Longitude	AdditionalInfo	StartDate	EndDate	Monday	Tuesday	Wednesday	Thursday
0	Inwood Park Greenmarket	Farmers Markets and Food Boxes	Farmers Markets	Isbam St bet Seaman & Cooper	NaN	Manhattan	10034	40.860000	-73.920320	Open year-round	NaN	NaN	NaN	NaN	NaN	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	NaN	NaN	NaN	NaN	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	11/21/2017	NaN	10am-7pm	NaN	NaN
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	11/22/2017	NaN	NaN	2:30pm-6:30pm	NaN
5	175th Street Greenmarket	Farmers Markets and Food Boxes	Farmers Markets	175th St bet Wadsworth Ave & Broadway	NaN	Manhattan	10033	40.845956	-73.937813	Market open dates: 6/29/2017 to 11/30/2017	06/29/2017	11/30/2017	NaN	NaN	NaN	8am-5pm

DATA DESCRIPTION 3

Data 3 : For the below analysis we will get data from wikipedia as given below :

1. New York Population
2. New York City Demographics
3. 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

	Neighborhood	NeighborhoodLatitude	NeighborhoodLongitude	Venue	VenueLatitude	VenueLongitude	VenueCategory
0	Marble Hill	40.876551	-73.91066	Arturo's	40.874412	-73.910271	Pizza Place
1	Marble Hill	40.876551	-73.91066	Bikram Yoga	40.876844	-73.906204	Yoga Studio
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	Loeser's Delicatessen	40.879242	-73.905471	Sandwich Place

DATA DESCRIPTION 4

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. The below is image of the Foursquare API data

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ANALYTICAL APPROACH

- We Clustered the neighborhood of Manhattan and Brooklyn using K means and Location ,Venue information from Foursquare API .
- After Taking in to Consideration New York Demographics ,Cuisines, Farmer Market, Geographical Co-ordinates we will come out with Recommendation

RESULT

From this venues data we filtered and used only the restaurant data for Brooklyn & Manhattan clustering. As we focussed only on restaurants business. Neighborhood K-Means clustering based on mean occurrence of venue category :

To cluster the neighborhoods into two clusters we used the K-Means clustering Algorithm. k-means clustering aims to partition n observations into k clusters in which each observation belongs to the cluster with the nearest mean. It uses iterative refinement approach.

Brooklyn & Manhattan :

In the below Map Visualization, we can see the different types of clusters created by using K-Means for Brooklyn & Manhattan.

Cluster0 : The Total and Total Sum of cluster0 has smallest value. It shows that the market is not saturated.

Cluster1 : The Total and Total Sum of cluster1 has highest value. It shows that the markets are saturated. Number of restaurants are very high.

Cluster0 : The Total and Total Sum of cluster0 has smallest value. It shows that the market is not saturated. There are untapped neighborhoods. List is as given below.

Cluster1 : The Total and Total Sum of cluster1 has highest value. It shows that the markets are saturated. Number of restaurants are very high.

CONCLUSION

Manhattan has its restaurant market saturated whereas Brooklyn has a neighborhood Sea gate where restaurant could be opened .Also in Manhattan we can raise above the competitors by providing Quality and Tasty foods of the people's desire variety. Also there are many other places in New York which can be explored other than Brooklyn & Manhattan .