

ABC Corporation

XYX Company

# The Battel of Neighborhood

Opening Restaurant in NY, USA

# Agenda

- ▶ Problem statement
- ▶ Objectives
- ▶ Teams
- ▶ Introductions
- ▶ The CITY NY Facts
- ▶ The CITY NY Business environments
- ▶ The CITY NY Cuisines / food style
- ▶ Recommended location
- ▶ Data Source
- ▶ Methodologies
- ▶ Conclusion

## ABC Corporation

▶ XYX Company

- ▶ Problem Statement : Mr. TNM , Managing Director of ABC Corporation wants to open new restaurant in New York City , USA.
- ▶ Objectives :ABC Corporation is a big chain company with different business domain. They have lots of restaurant across the globe. Now they contact with us to support them for opening restaurant in New York City.
- ▶ Teams:
  - ▶ Mr. A. Alam PM
  - ▶ Mr. S. Hoque TL
  - ▶ Mr. Z. Matrine TM
  - ▶ Mr. A. Khan TMs

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## Introductions

- ▶ The City of New York is famous for its excellent cuisine. It's food culture includes an array of international cuisines influenced by the city's immigrant history / and mixture of people culture and test.
  - ▶ Central and Eastern European people (bagels, cheesecake, hot dogs, knishes, and delicatessens)
  - ▶ Italian People ( New York-style pizza and Italian cuisine)
  - ▶ 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
  - ▶ 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.
- ▶ At the circumstances in New York (USA) , need very strong and visionary plan to survive in restaurant business . There has he level of plans
  - ▶ Pre Plan : Analysis the location , demographic information , population and cultures
  - ▶ Short Term Plan: Based on the analysis short term plan needs to take .
  - ▶ Mid Term Plan
  - ▶ Long term plan
  - ▶ Backup Plan
  - ▶ Exit Plan
- ▶ The Acceptance criteria of the project will be a good recommendation of borough/Neighborhood choice to ABC Corporation based Analysis and evidences. Our suggestion or recommendations should be accepted by higher management of ABC Corporation



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# The New York City

## ▶ City facts:

- ▶ A little over 8 million people live in New York City
- ▶ High Density of population
- ▶ At a certain, unnamed "successful restaurant" downtown, weekly dinner revenue adds up to about \$100,000.
- ▶ Verities of people and different food test
- ▶ Restaurant Business in highly competitive
- ▶ Street Foods and Fast foods are popular
- ▶ Global hub for Business

## ▶ Business Environment :

- ▶ Markets are highly competitive
- ▶ Well establish and highly developed city cost of business will be high
- ▶ Target Customer should be analysis more carefully
- ▶ Return of Investment (ROI) will be slow



# The New York City

## ► Foods / Cuisine :

- Central and Eastern European people (bagels, cheesecake, hot dogs, knishes, and delicatessens)
- Italian People ( New York-style pizza and Italian cuisine)
- 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
- 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.



Eastern Collection	
Arabian Cuisine MENU	
Iftar Food	
Biryani with chicken	750g \$29
Baked chicken	350g \$21
Atayef	350g \$21
Masakul	750g \$15
Shortbread	350g \$25
Skewers of lamb	350g \$21
Kunafa	350g \$21
Set for a meal	350g \$21
Potatoes stuffed with meat	350g \$29
Hummus of peas	350g \$21
Small sweet dumplings	350g \$42



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## Recommendation

- ▶ Below factor will be study in to chose the location
  - ▶ Density of the population in the area
  - ▶ New York City Demographic / area borough/Neighborhood
  - ▶ Operational cost of the business
  - ▶ Available supplier (Vegetable firs, whole sales market, short term supplier )
  - ▶ Land mark of the area ( Gym , Any big enterprise , any school , university , community halls etc)
  - ▶ Possible competitor in the Restaurant Business in this area
  - ▶ Segmentation of borough

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## Data Source

### ▶ Neighborhood:

- ▶ Our Data set has 5 boroughs and 306 neighborhood. To make clustering and segmentations we need complete dataset where we can find all boroughs (5) along with its associated neighborhoods. This data set also need Latitude and Longitude coordinate of each neighborhoods. We will use blow link to collect data.

[https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](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 Source

## ▶ Supply Market Data:

- ▶ This dataset will show the all supplying material to the restaurant. Example vegetables, dairy products, fish, meat, baked goods, and other processed foods. We also analysis the data where supplier cost is lesser than traditional market price . Data set links <https://data.cityofnewyork.us/dataset/DOHMH-Farmers-Markets-and-Food-Boxes/8vw6iz2> <https://www.grownyc.org/greenmarketco/foodbox>

	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	Islem St bet Seaman & Cooper	NaN	Manhattan	10034	40.869009	-73.926020	Open year-round	NaN	NaN	NaN	NaN	NaN	NaN
1	82nd Street Greenmarket	Farmers Markets and Food Boxes	Farmers Markets	82nd St bet 1st & 10th Aves	NaN	Manhattan	10028	40.773448	-73.946954	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: 8/13/2017 to 11/21/2017	09/13/2017	11/21/2017	NaN	10am-7pm	NaN	NaN
4	170 Farm Stand	Farmers Markets and Food Boxes	Farmers Markets	170th St & Townsend Ave	NaN	Brox	10452	40.940095	-73.918827	Market open dates: 7/5/2017 to 11/22/2017	07/05/2017	11/22/2017	NaN	NaN	2:30pm-5:30pm	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: 8/29/2017 to 11/30/2017	08/29/2017	11/30/2017	NaN	NaN	NaN	8am-5pm

# Data Source

## ▶ Demographic Data:¶

- ▶ Demographic data will be collected from Wikipedia. Example Population, Cuisine and demographic of NY City Bellow will be links

▶ [https://en.wikipedia.org/wiki/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/Economy_of_New_York_City)

▶ [https://en.wikipedia.org/wiki/Portal: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/Cuisine_of_New_York_City)

▶ [https://en.wikipedia.org/wiki/List\\_of\\_Michelin\\_starred\\_restaurants\\_in\\_New\\_York\\_City](https://en.wikipedia.org/wiki/List_of_Michelin_starred_restaurants_in_New_York_City)

- ▶ New York City geographical coordinate's data will be utilized as input for the Foursquare API. This will be shows us venues information for each neighborhoods. Foursquare API will be used to explore neighborhoods in NY City.

	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%	—

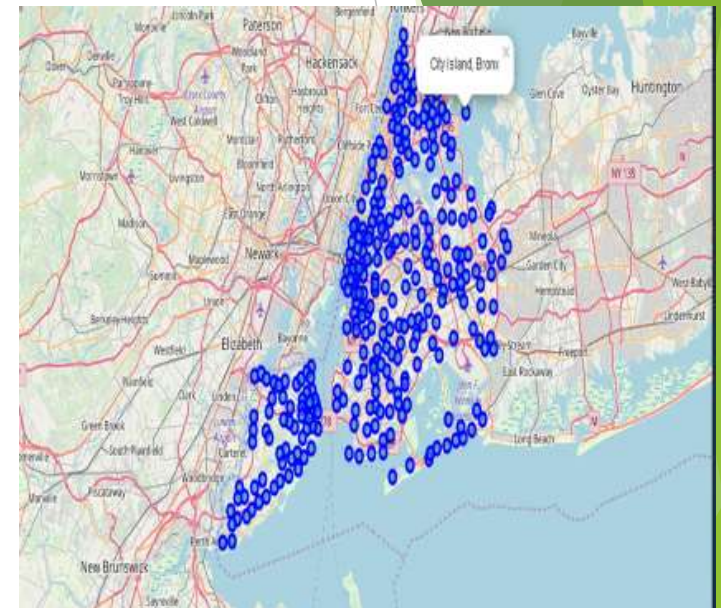
	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Wakefield	40.894705	-73.847201	Lollipops Gelato	40.894123	-73.845892	Dessert Shop
1	Wakefield	40.894705	-73.847201	Rite Aid	40.896521	-73.844680	Pharmacy
2	Wakefield	40.894705	-73.847201	Cooler Runnings Jamaican Restaurant Inc	40.898263	-73.850478	Caribbean Restaurant
3	Wakefield	40.894705	-73.847201	Carvel Ice Cream	40.890487	-73.848568	Ice Cream Shop
4	Wakefield	40.894705	-73.847201	Dunkin Donuts	40.890631	-73.849027	Donut Shop

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## Methodology

- ▶ Below Methodology will follow :
  - ▶ Analysis New York City data (Neighborhoods)
  - ▶ Clustering Of Manhattan and Brooklyn
  - ▶ Clustering of Bronx , Queens & Staten Island
  - ▶ Only Restaurant , coffee house related data will be considered
- ▶ New York City Geographical coordinate
  - ▶ Load & Explore data for NY city (newyork\_data.json)
  - ▶ Analysis data using Python and R
  - ▶ Create DataFrame from the foursquare data
  - ▶ Perform necessary data regaling
  - ▶ Use Geopy & Folium Library to create maps





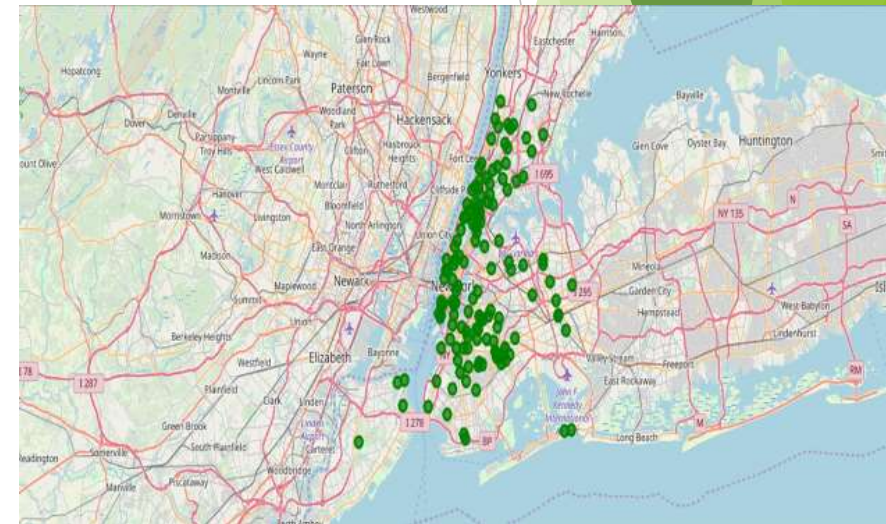
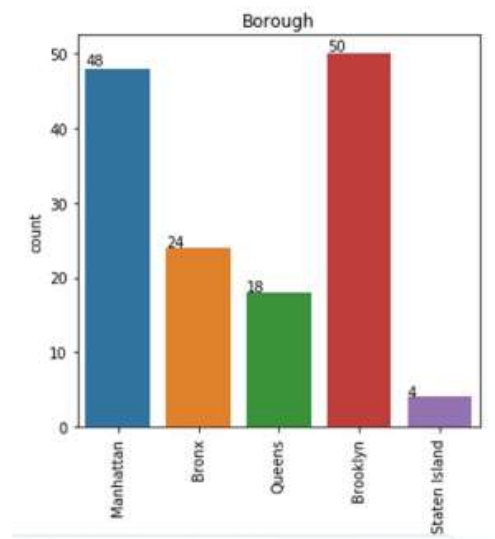
## Methodology

### ► Supplier data :

- Based on the available information in websites, internment and our data source

- There are totally 144 Farmers Market in NY
- Height number are in Brooklyn and Lowest in Staten island . Also Queen island and Bronx island is manageable for getting supplier
- Suppliers are offering Door step delivery but in high price

### ► Fig : 02 - Farmers market location



## Methodology

- ▶ New York Population :
  - ▶ Manhattan city is the geographically smallest but most populated city borough.
  - ▶ Manhattan's has highest density in all US states. It Almost 27, 00 + /Square KM
  - ▶ Brooklyn on the western tip of long island .This city is the most populated borough
  - ▶ Queens , on long Island north and east of Brooklyn , is geographically largest borough
- ▶ Due to verities of population NY is good place for restaurant. It has many types of restaurant like Indian , African , Chinses , Italian , Bangladeshi etc.

	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

	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%	-



ABC Corporation

## Methodology

- ▶ The Bronx foods are Italian , Albanian
- ▶ Manhattan cuisines are Italian , Indian , American

▶ XYX Company

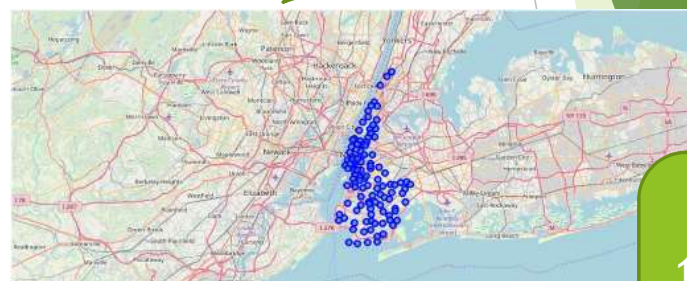


## Methodology

- ▶ Analyzing Data with Foursquare.com
- ▶ Input New York City coordinated to Foursquare API in order to pull venues information
- ▶ Use same data to find out neighborhoods , also identified top 100 venues
- ▶ Part 1 : Brooklyn and Manhattan (Venus data and visualization )

There are 9708  
Venus &  
397unique  
Venue types

	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



There are  
10805 Venus &  
387 unique  
Venue types

- ▶ Part2: Bronx Queens & Staten Island (Venus data and visualization )

	Neighborhood	NeighborhoodLatitude	NeighborhoodLongitude	Venue	VenueLatitude	VenueLongitude	VenueCategory
0	Wakefield	40.894705	-73.847201	Lollipops Gelato	40.894123	-73.845892	Dessert Shop
1	Wakefield	40.894705	-73.847201	Ripe Kitchen & Bar	40.898152	-73.838875	Caribbean Restaurant
2	Wakefield	40.894705	-73.847201	Jackie's West Indian Bakery	40.889283	-73.843310	Caribbean Restaurant
3	Wakefield	40.894705	-73.847201	Ali's Roti Shop	40.894036	-73.856935	Caribbean Restaurant
4	Wakefield	40.894705	-73.847201	Rite Aid	40.896521	-73.844680	Pharmacy

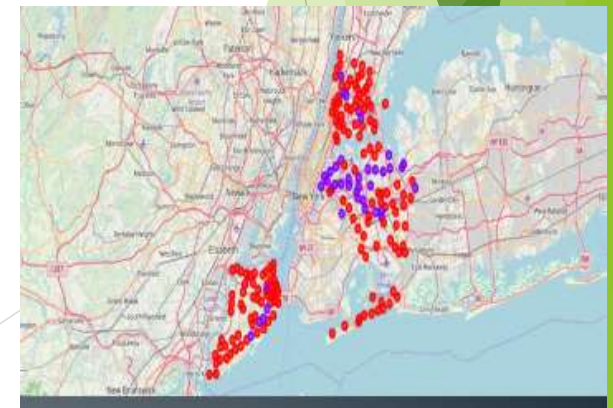




## Methodology

### ► Decision / Recommendation:

- Brooklyn and Manhattan :
  - Segmentation and clustering of Neighborhoods (cluster0 , Cluster1)
    - Cluster0 : Cluster summation value is smallest which shows there is opportunity
    - Cluster1: Summation value of this Cluster is high which represent competition will be high & ROI will less
- Bronx, queens & Stanton Island (cluster0 , Cluster1)
  - Cluster0 : Cluster summation value is smallest which shows market is still with in control and ROI will be high
  - Cluster1: Summation value of this Cluster is high which represent competition will be high & ROI will less



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## Concusion

- ▶ Analysis perform of data collected from internet and data sets are limited in size
- ▶ Periodic Analysis needed with updated data
- ▶ Brooklyn and Manhattan is highly density and it has huge number of restaurants. Restaurant business is quite challenging their.
- ▶ Although there is good number of Restaurant Available in Queens , Staten Island and Bronx but it is not like other part. Doing restaurant business in these area will face less competition than Brooklyn & Manhattan.
- ▶ In restaurant business Indian / Italian restaurant can be explored.
- ▶ It needs to work more in food items and regular research with food and test needed



# Thank You