THE BATTLE OF
NEIGHBORHOODS

XYZ Company Limited

1. ANNEX,
2. FOREST HILL SOUTH,
3. Queens, 4. CHRISTIE Bronx,
5. LAWRENCE ISLAND

INTRODUCTION

- Toronto city review for XYZ Company.
- Optimum location for new Restaurant business
- **Business Problem :**
  - Choice of first neighborhood to start restaurant business.
  - Easy to replicate.
  - Low competition
  - High demand
  - Choice of Menu
- **Success Criteria**
  - Best neighborhood which meets above criteria.

- Most populous city in the Canada
- It is multicultural
- Provides lot of business opportunities
- Business friendly environment
- Attracted many different players into the market
- Global hub of business and commerce.
- The city is a major centre for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theatre, fashion, and the arts in the Canada

—

- 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 analysed carefully

- One should strategically targeting the market inorder to –

  -This will help in reduction of risk.

  -The Return on Investment will be reasonable.

TORONTO-CITY CUISINE

The City of TORONTO is famous for its excellent cuisine. It's 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 STUDY TO DECIDE ON RESTAURANT LOCATION

- TORONTO Population
- Tornonto City Demographics
- Are there any Farmers Markets, Wholesale markets etc nearby so that the ingredients can be purchased fresh to maintain quality and cost?
- Are there any venues like Gyms, Entertainmnet zones, Parks etc nearby where floating population is high etc
- Who are the competitors in that location?
- Cuisine served / Menu of the competitors
- Segmentation of the Borough
- Untapped markets
- Saturated markets etc The list can go on...

DATA DESCRIPTION - 1

- *Data 1 :* Neighborhood has a total of 3 boroughs and 103 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.CN.edu/catalog/CN_2451_34572

DATA DESCRIPTION - 2

- *Data 2 :* Farmers Markets data -

- https://data.cityofToronto.us/dataset/DOHMH-Farmers-Markets-and-Food-Boxes/8vwk-6iz2

- A *farmers' market* is often defined as a public site used by two or more local or regional producers for the direct sale of farm products to consumers. In addition to fresh fruits and vegetables, markets may sell dairy products, fish, meat, baked goods, and other minimally processed foods.

	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	Isham St bet Seaman & Cooper	NaN	Manhattan	10034	40.869009	-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 : Data from Wikipedia pages as given below :

- Toronto Population
- Toronto City Demographics
- Cuisine of Toronto

https://en.wikipedia.org/wiki/Economy_of_Tornto_City
https://en.wikipedia.org/wiki/Portal:toronto_City
https://en.wikipedia.org/wiki/Cuisine_of_toronto_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%	–

DATA DESCRITION - 4

- Data from foursquare.com

Toronto 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.

|	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

ANALYTIC APPROACH

- Toronto city neighbourhood has a total of 5 boroughs and 306 neighborhoods

- PART 1 - Clustering of Christie and Forest hill south

- PART 2 - Clustering of danvisel, Queens and Lawrence park.

- Only restaurant data is filtered from foursquare.com venues data and utilized for this project.

- This is done because of the following Exploratory data analysis.

Data 1- Toronto city Geographical Coordinates Data.

- Load the data and explore data -
    toronto_**data.json**

- Transform the data of nested python dictionaries into a pandas dataframe.

- Dataframe contains the geographical coordinates of Toronto neighborhoods.

- Data will used to get Venues data from Foursquare.

- Geopy and folium libraries used to create a map of Toronto city with neighborhoods superimposed on top.

METHODOLOGY 2
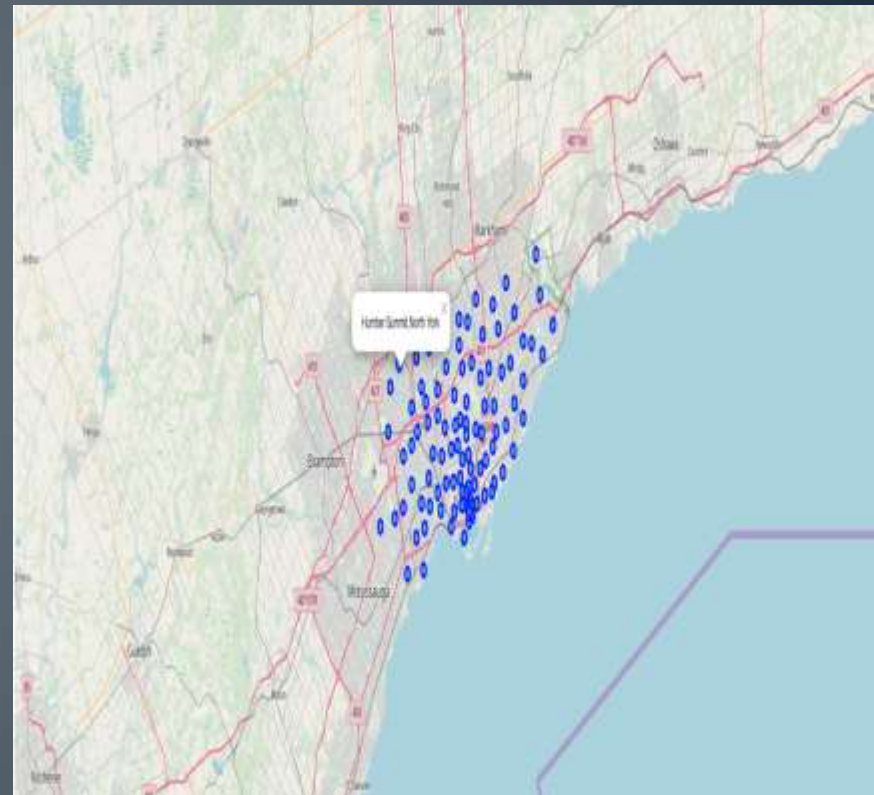
- **Data 2-** DOHMH Farmers Markets and Food Boxes dataset.
- In this we will be using the data of Farmers Markets
- There are totally 144 Farmers Markets in Toronto city.
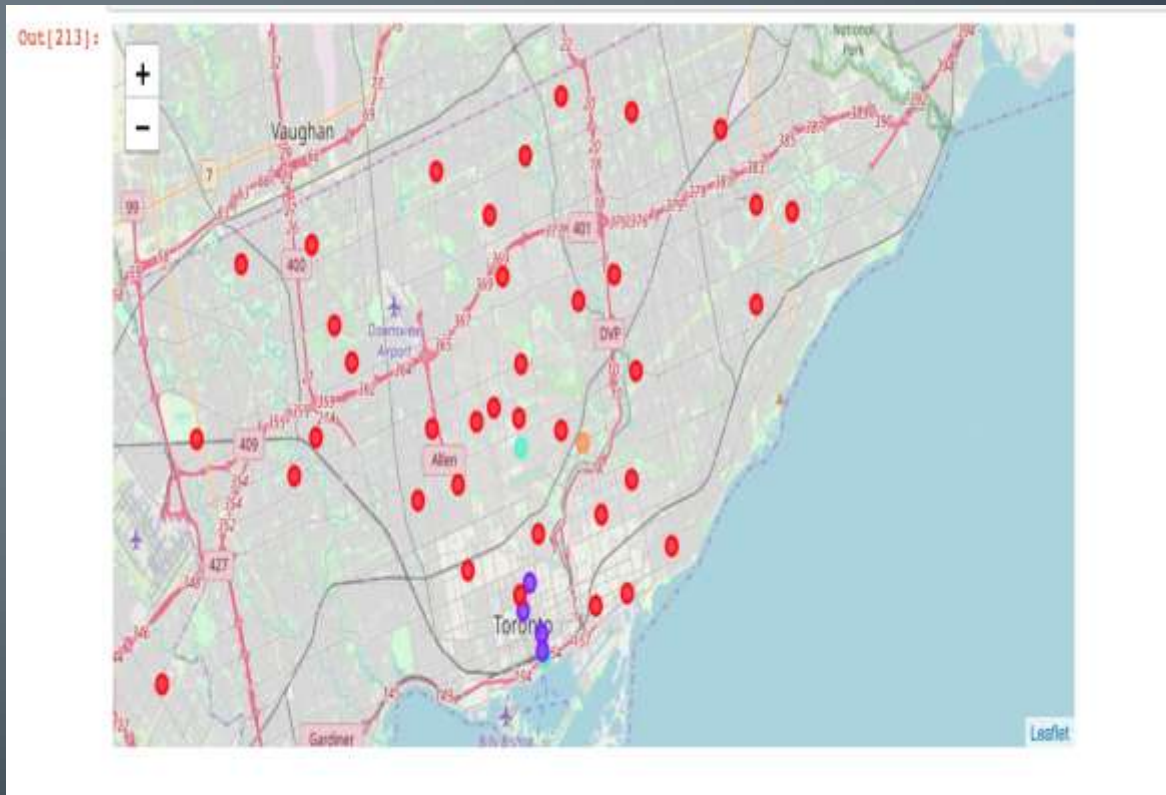- Highest number are in Christie and Annex.And lowest in Queens, Bronx and Lawrence park
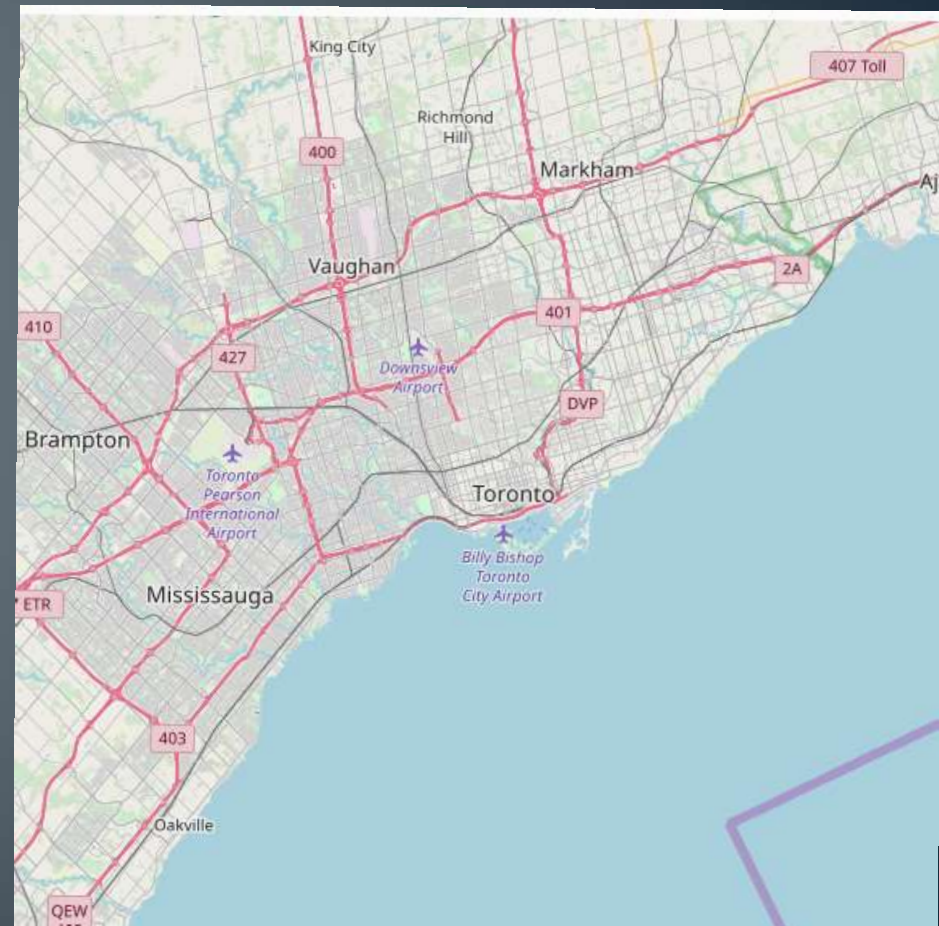
METHODOLOGY - 2

- **Market visualisation–Toronto City**

METHODOLOGY - 3

- **Data 3 :** To analyize Toronto city Population, Demographics and Cuisine , scrapped the data from Wikipedia pages given above in the data section.

- We used BeautifulSoup python library.

- Beautiful Soup is a Python package for parsing HTML and XML documents (including having malformed markup, i.e. non-closed tags, so named after tag soup).

- It creates a parse tree for parsed pages that can be used to extract data from HTML, which is useful for web scraping

METHODOLOGY – 3

- Toronto City is the most populous city in the canada, with an estimated record high of 8,622,698 residents as of 2017,incorporating more immigration into the city than outmigration since the 2010 canada Census.

- The racial composition is as given below. This is the reason Toronto city has restaurants serving cuisine from many countries such as India, Africa, Japan etc. This also increases the scope for restaurants business in Toronto 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%	-

- **Annex CUISINE** -Most Preferred Food in annex is – Italian, Purto Rican & Mexican

- **Christie CUISINE** - Most Preferred Food in Christie is – Italian, American, Puerto Rican and Indian.

METHODOLOGY – 3 -

- **QUEENS CUISINE -** Most Preferred Food in Queens is – Indian, Irish, Pakistani and Mexican.

- **THE Dansvslie CUISINE -** Most Preferred Food in The danscvile is – Italian, Puerto Rican, Albanian and Dominican.

METHODOLOGY - 4 - Foursquare.com

- Toronto city geographical coordinates data has be utilized as input for the Foursquare API, that has been leveraged to provision venues information for each neighborhood.

- We used the Foursquare API data to explore neighborhoods in Toronto City.

- Using the geographical coordinates of each neighbourhood foursquare API calls are made to get top 200 venues in a radius of 1000 meters

  PART – 1 Annex and Forest hill south

  PART – 2 Christie, Queens and Lawrence park

METHODOLOGY – 4

annexand Forest hill south Venues Visualization : Generated the below annex and Forest hill Venues Visualization. The "BM_venues" dataframe has 9708 venues and 397 unique venue types.
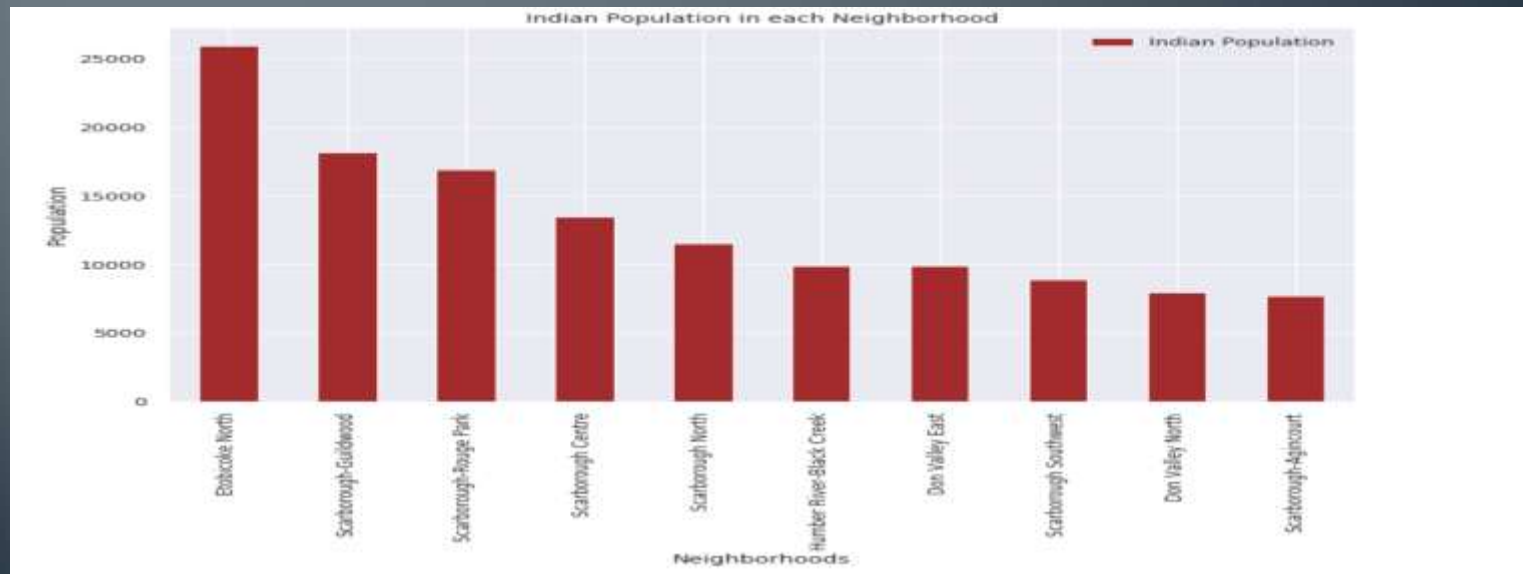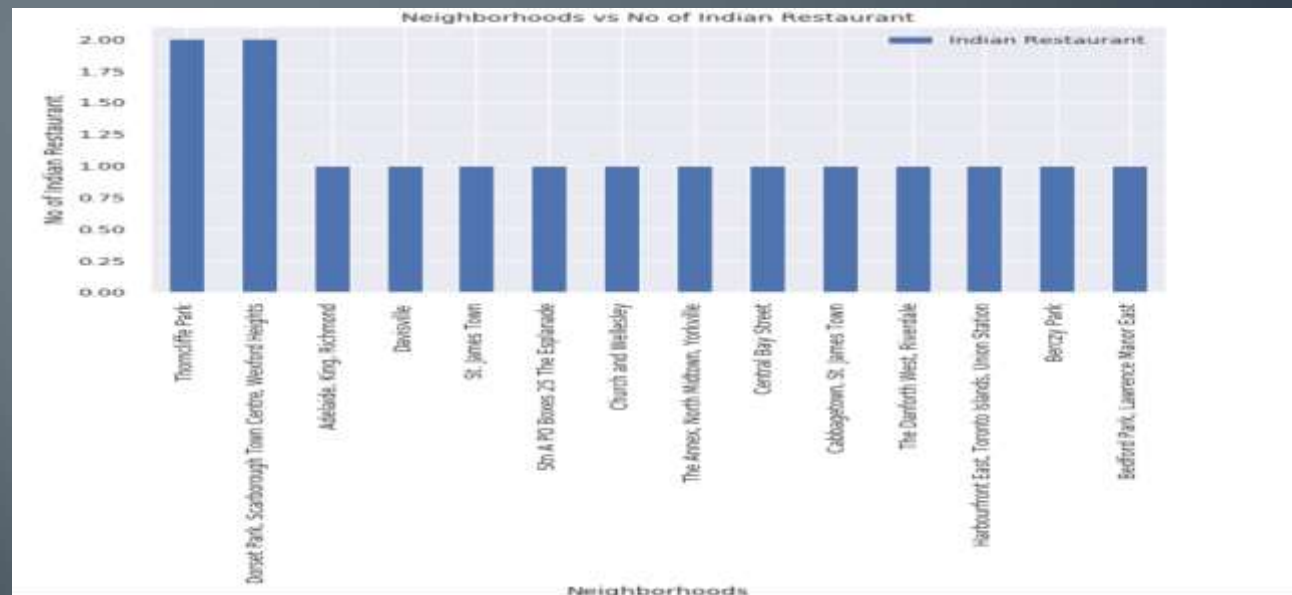
METHODOLOGY – 4
PART – 2 Bronx, Queens and Staten Island

Bronx, Queens and Staten Island Venues Visualization : The "BQS_venues" dataframe has 10805 venues and 387 unique venue types.

- **Segmenting and Clustering Neighborhoods**

- **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 is very high. Lot of competition. Saturated neighborhoods.

RESULT

RESULT

- **Segmenting and Clustering Neighborhoods**

- **Cluster0** : The Total and Total Sum of cluster0 has smallest value. It shows that the market is not saturated.There are untapped markets.

- **Cluster1 :** The Total and Total Sum is very high. Lot of competition. Saturated neighborhoods.
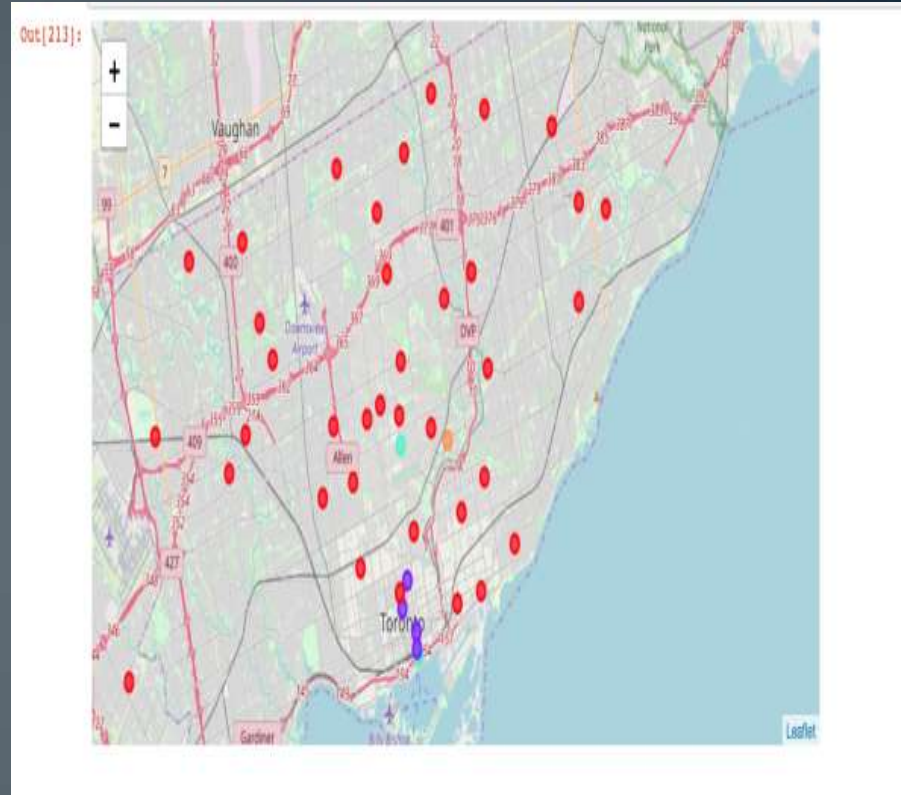
DISCUSSION

- Scope to explore cuisines of various countries in Annex, Queens and Lawrence park

- In Forest hilland christie restaurants , cuisines of many countries are part of their Menu. Risk can be taken with great menu on board. It also shows people love and explore cuisines of various countries.

- Scope to increase Farmers markets in Annex, Queens and Lawrence park.

- Region - Cluster0

- Neighborhood – Lawrence park– Tod Hill, Port Ivory, Bloomfield

CONCLUSION

- Analysis performed on limited data
- Re-run program with updated information
- **Annex and Forest hill** has high concentration of restaurant business. Very competitive market.
- **Christie, Queens and Lawrence park** od number of restaurants but not as many as required. So this can be explored.
- As per the neighbourhood or restaurant type mentioned like Indian Restaurant, analysis can be checked. A venue with lowest risk and competition can be identified