**Capstone Project - The Battle of Neighbourhoods**

**Finding best place for opening new Restaurant**

**Introduction/Business Problem**

In this project we are trying to solve the Business problem for owner who wish to open new branch in foreign country and he has no much idea which city he should prefer then other whenever contactor is offering him two or more choice.

Mr. Rohan is running successfully XYZ Cuisine in Asian counties, now he wants to open branch of its Indian cuisine in North America continent, but at present he may able to open only one branch. He has two option to open branch either in Toronto or New York. The problem is, “which city should he select for running successful business”

There are few criteria he might he will prefer the location:-

1. What is the total population in city
2. No of Indian subcontinent immigrants in that location
3. How many Indian restaurants are present in that area
4. No of tips for any venue shows Indian cuisine demand in that area.

**2. Data acquisition and cleaning**

To solve this, dataset is required, demographic data of Toronto and New York. Based on demographic data we can identify the migrants community from Indian subcontinent in both the city. Based on this we can identify the city which suitable for client.

Foursquare data is required to find of venues and famous hotel/place in the city and the place where restaurants can be opened.

Example : we want to search a place in Toronto we can use following query

https://api.foursquare.com/v2/venues/search?client\_id=\*\*\*\*\*\*&client\_secrate=\*\*\*\*&ll=40.73,-70.01&query=indianrestaurant

Then we need to find number of Indian restaurants near famous venue.

https://api.foursquare.com/v2/venues/trending?client\_id=\*\*\*\*\*\*&client\_secrate=\*\*\*\*&v=201705&ll=40.73, -74.01

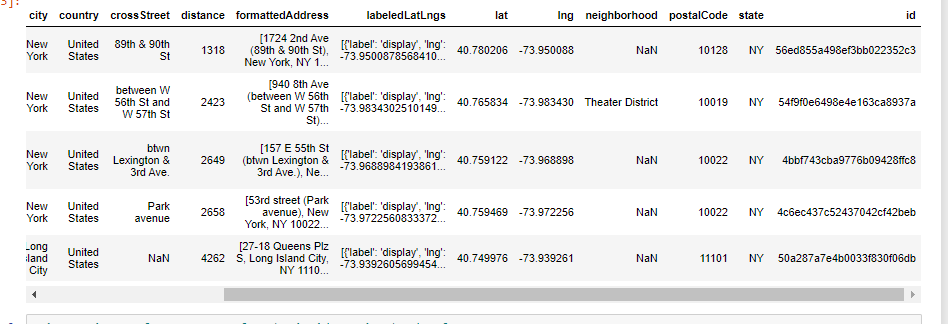
https:// api.foursquare.com/v2/venues/search?client\_id=\*\*\*\*\*\*&client\_secrate=\*\*\*\*&ll=40.73,-70.01&query=indianrestaurant

What is the rating given to these restaurants based tips. This will give us the idea whether it is suitable to open Indian restaurants.

https://api.foursqaure.com/v2/venues/uniqueID/tips?client\_id=\*\*\*&client\_secret=\*\*\*&v=201705

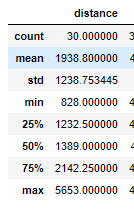
* To clean data the following steps are used

1. Removing NA/ NULL value rows/columns
2. Removing duplicate columns
3. Renaming column



Experiment and results

This giving the description like total no of restaurant with limit in this case 30nos, mean distance it of all restaurants is 1.9 km approx. std div 1.2 km means there quite distance between two Indian restaurants. And 22 out of 30 restaurants lies near to central park Manhattan, New York



Conclusion

Purpose of this project was to identify an area of opening new Indian restaurant which is closer to centre with in order to search optimal location. By calculating restaurant density distribution from Foursquare.com data we have first identified general boroughs. Final decision on optimal restaurant location will be made by stakeholders based on specific characteristics of neighbourhoods and locations in every recommended zone.

So far the recommendation is given based population density, per captia income, restaurant density and community in that area. In future selection may based on air quality , road and other environment factors.