1.Introduction & Business Problem:

A restaurant is a business which prepares and serves food and drink to customers in return for money, either paid before the meal, after the meal, or with an open account. The City of New York is famous for its excellent cuisine. So, it is evident that to survive in such competitive market it is very important to strategically plan. Various factors need to be studied in order to decide on the Location such as:

New York Population

New York 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, Entertainment 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 Even though well-funded XYZ Company Ltd. need to choose the correct location to start its first venture. If this is successful, they can replicate the same in other locations. This would interest anyone who wants to start a new restaurant in New York city.

2. Data:

One city will be analysed in this project: New York City. We will be using the below datasets for analysing New York city

Data 1: Neighbourhood has a total of 5 boroughs and 306 neighbourhoods. In order to segment the neighbourhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighbourhoods that exist in each borough as well as the latitude and longitude coordinates of each neighbourhood. Data source: https://cocl.us/new_york_dataset Description: This data set contains the required information. And we will use this data set to explore various neighbourhoods of New York city.

Date 2: Indian restaurants in each neighbourhood of New York city. Data source: Foursquare API Description: By using this api we will get all the venues in each neighbourhood. We can filter these venues to get only Indian restaurants. Data 3: GeoSpace data Data source: https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm Description: By using this geo space data we will get the New York Borough boundaries that will help us visualize choropleth map.

Analysis

We will import the required libraries for python.

pandas and numpy for handling data.

request module for using FourSquare API.

geopy to get co-ordinates of City of New York.

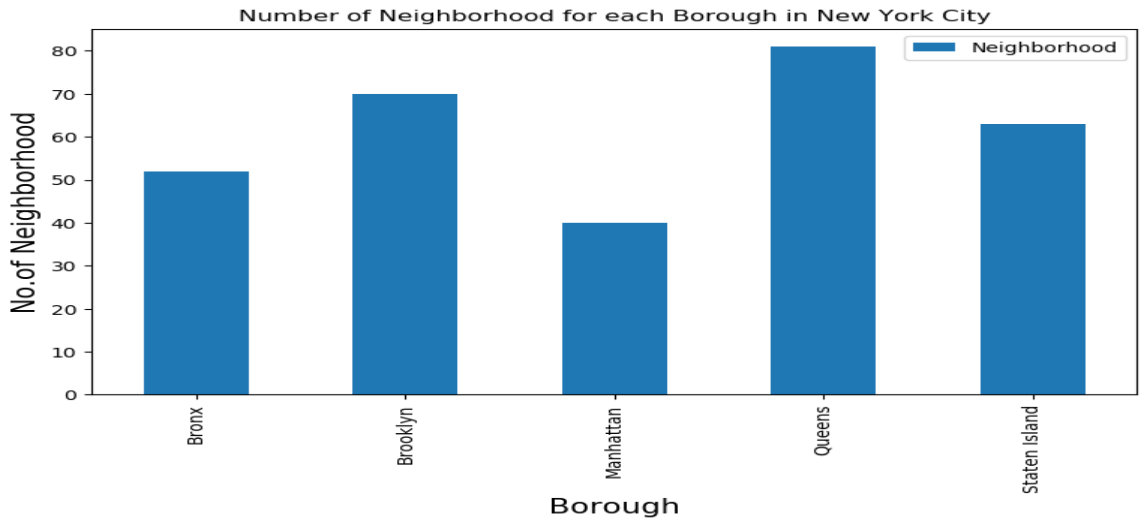
Now we define a function to get the geocodes i.e latitude and longitude of a given location using geopy.

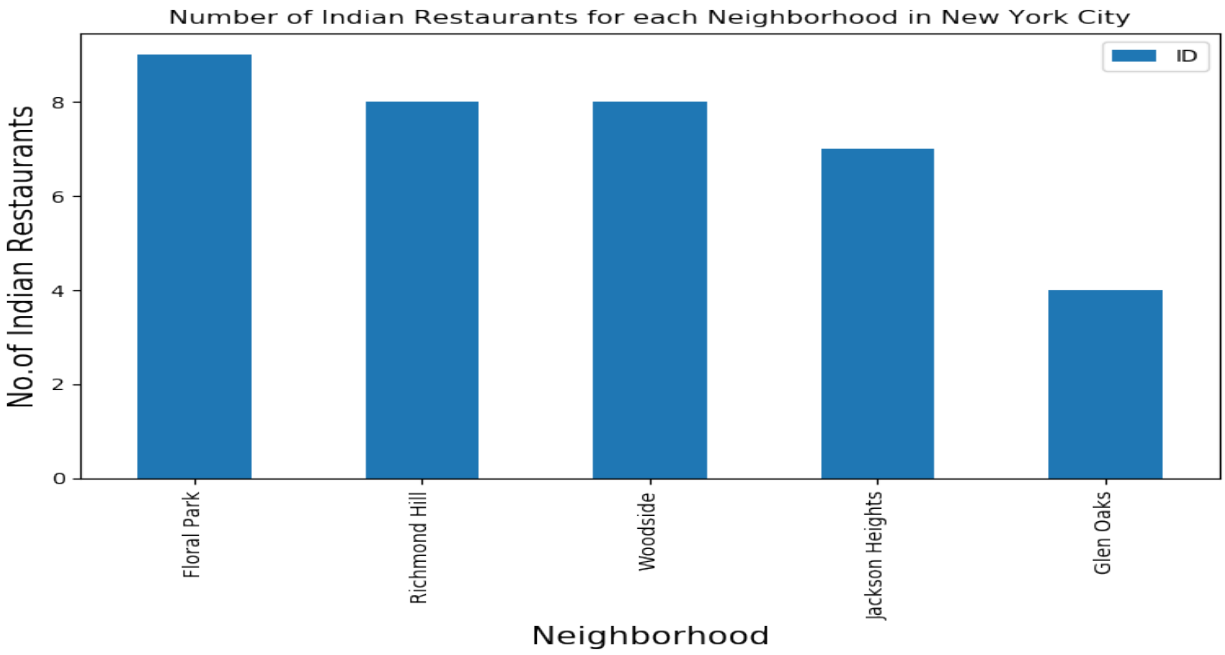
We define a function to intract with FourSquare API and get top 100 venues within a radius of 1000 metres for a given latitude and longitude. Below function will return us the venue id , venue name and category.

Now we will define a function to get venue details like like count , rating , tip counts for a given venue id. This will be used for ranking.

Now we define a funtion to get the new york city data such as Boroughs, Neighborhoods along with their latitude and longitude.

We will call the above funtion to get the new york city data.





Results 1. We see that Queens has the highest number of Neighbourhoods.

Conclusion

Astoria (Queens), Blissville(Queens), Civic Center(Manhattan) are some of the best nei ghborhoods **for** indian cuisine.

Manhattan have potential Indian Resturant Market/

Staten Island ranks last **in** average rating of Indian Resturants.