The Battle Of Neighborhood

Introduction

- In this project my main focus is on New York City and as we all know that it is the most populous city in the United States. With an estimated 2019 population of 8,336,817 distributed over about 302.6 square miles (784 km2), New York is also the most densely populated major city in the United States. New York City is a global hub of business and commerce, as a center for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theater, fashion, thus it attracts many people from all over the world and thus it forms the major entry point to the immigrants and therefore New York City's food culture includes an array of international cuisines influenced by the city's immigrant history.

Business Problem

- Project will concentrate on following problems:
- What is best place in New York City for Indian Cuisine?
- Which is the best place to stay if you prefer Indian Cuisine?
- Visualizing every parts of New York City that serves Indian foods
- Which are the areas that lack Indian Restaurants?

Data Section

- For this particular project the data was collected from various resources available on Google therefore keeping the BUSINESS PROBLEM in mind which is mentioned in INTRODUCTION part, below are the required data and information along with the sources are -:

- New York City data that contains list of Boroughs, Neighborhoods along with their location i.e. latitude and longitude.
- Data set is available here : " https://cocl.us/new_york_dataset " which is in JSON f ormat.
- Geospatial data are defined in the ISO/TC 211 series of standards as data and information having an implicit or explicit association with a location relative to Earth.
- Informaton regarding geospatial data is available at :
- " https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm "
- Indian restaurants in each part/area of New York City.
- For this purpose Foursquare API was used which provides location based experie nces with diverse information about venues, users, photos, and check-ins. The **API** supports real time access to places, Snap-to-Place that assigns users to specific l ocations, and Geo-tag.
- Foursquare Web site - "https://developer.foursquare.com/"

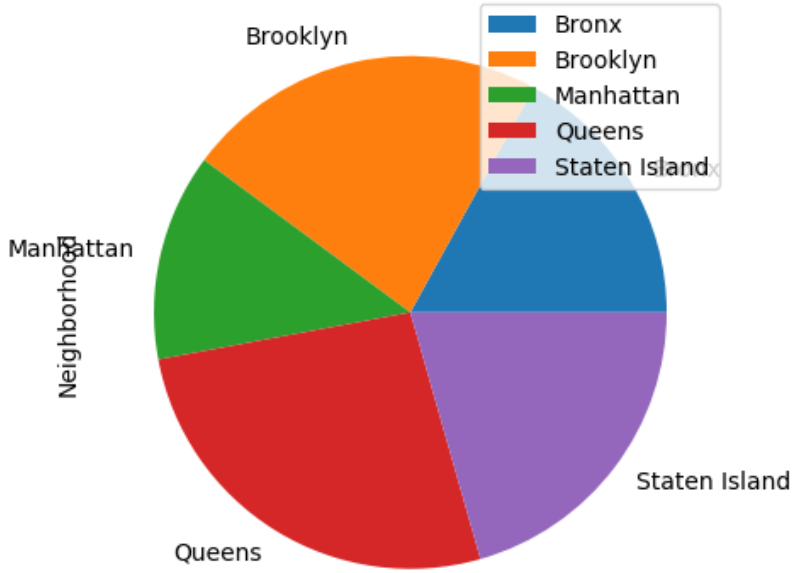
Methodology

- There were 9 steps in which this project was completed which are as follows:-
- Step 1: It involves importing a different library
- Step 2: Second step involves utilizing the Foursquare API
- Step 3: Third step involves collection of data from the link mentioned in Data Section : " https://cocl.us/new_york_dataset "
- Step 4: Visualizing the dataset through pie chart and bar plot
- Step 5: Prepared neighborhood list that contains Indian restaurants
- Step 6: Involves plotting a bar chart which shows that **Queens** have highest no. of Indian restaurants.
- Step 7: Now with help of **Foursquare API** related factors such as "Tips", "Rating", "Likes" were found and recorded.
- Step 8: Considering all the neighborhoods with average rating greater or equal 9.0 to visualize on map.
- Step 9: Visualizing Neighborhood and Borough depending on Average Rating using Folium Library

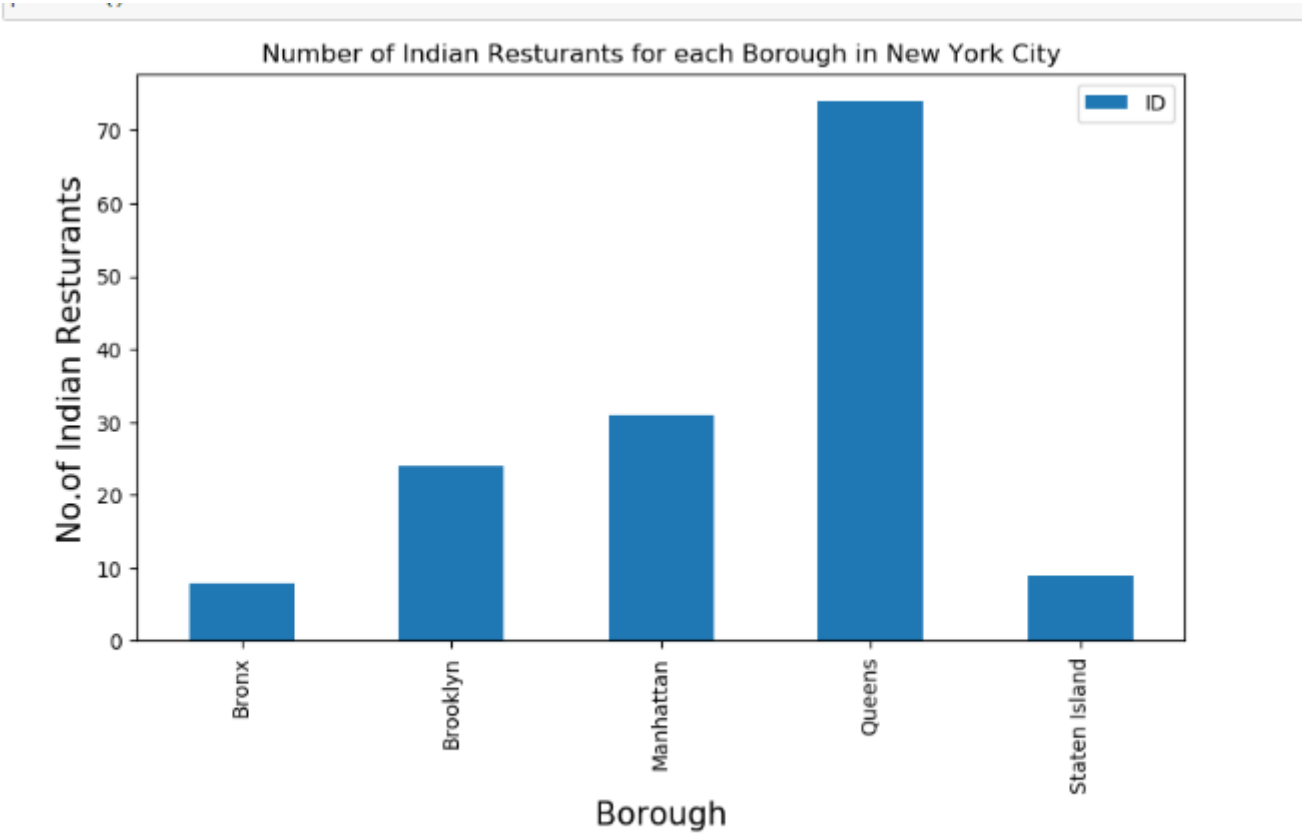
Data Visualization -1

Visualising above 306 Neighborhood by creating pie chart

In [8]:
```
plt.figure(figsize=(9,5), dpi = 100)
#giving a bar plot
new_york_data.groupby('Borough',axis=0)['Neighborhood'].count().plot(kind = 'pie')
plt.legend(loc = 'upper right')
#displays the plot
plt.show()
```



Data Visualization Part-2



From above bar plot it can be seen that Queens has highest number of Indian restaurents

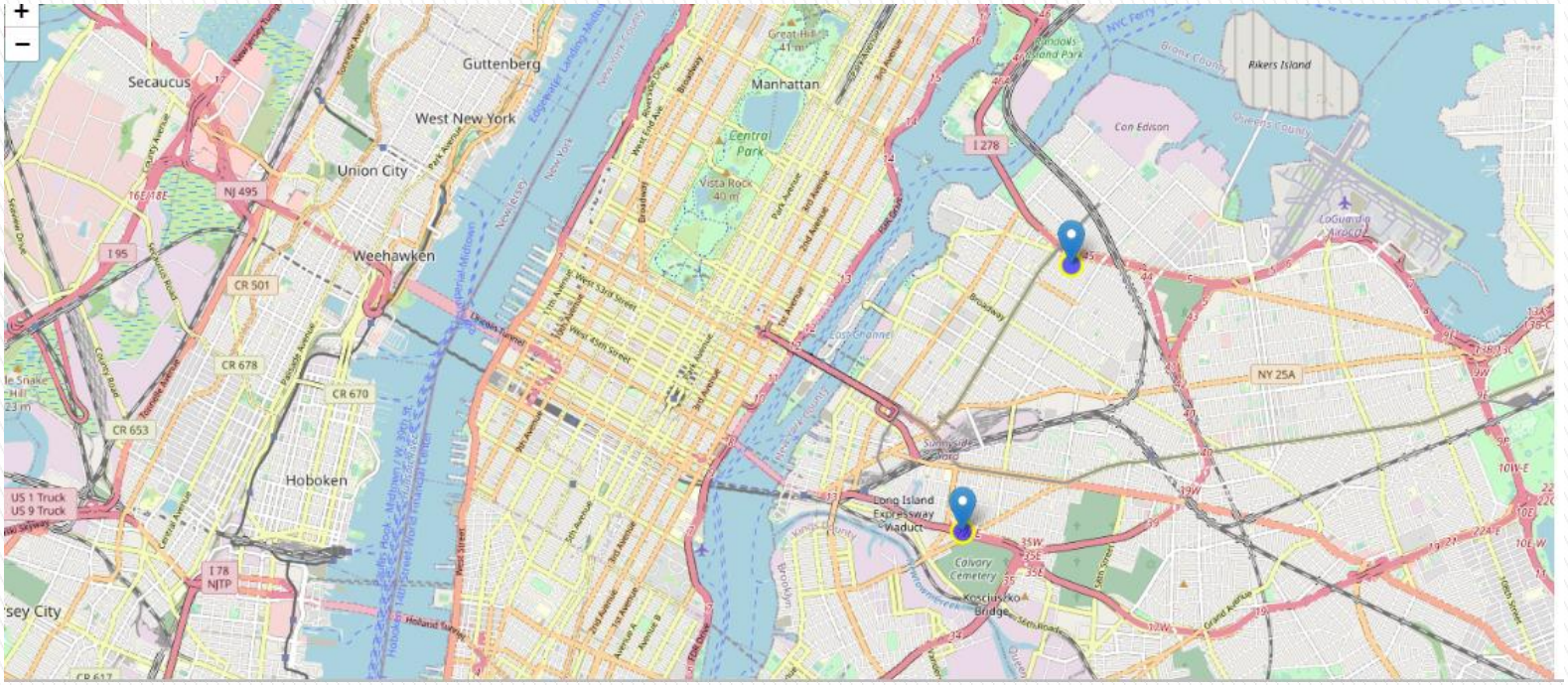
Final Data

The image shown here consist list of neighborhood with high average rating point

```
In [52]: ny_neighborhood_stats.sort_values(['Average Rating'],ascending=False).head(10)
```

Out[52]:

	Neighborhood	Average Rating
0	Astoria	9.0
5	Blissville	9.0
26	Fort Greene	8.8
13	Clinton Hill	8.8
53	Prospect Heights	8.7
46	Murray Hill	8.6
71	Tudor City	8.6
70	Tribeca	8.6
12	Civic Center	8.6
33	Holliswood	8.5



Final Map

The Map which is shown here which is present in Folium library shows the top Indian Restaurants with rating point>=9.0

Conclusion

- From the analysis here is the conclusion:
- 1) Manhattan is the best place to stay if you prefer Indian Cuisine
- 2) Manhattan have potential Indian Resturant Market
- 3) Staten Island ranks last in average rating of Indian Resturants.
- 4)Floral Park in Queens has the highest number of Indian Resturants.
- Astoria(Queens), Blissville(Queens) are the only 2 best neighborhood for Indian Cuisine (for avg rating >=9.0)