IBM Capstone Project

Analysis on Indian Restaurants in NYC

Data

- List of Boroughs, Neighborhoods with latitudes and longitudes
  - Source - https://cocl.us/new_york_dataset
  - Description - A data frame with information is created using the data set. Longitudes and latitudes are obtained using geopy.

- Indian restaurants in NYC
  - Source – Foursquare API
  - Description – Indian restaurants will be filtered out from venue data obtained via Foursqaure. Further information like rating and tips are used for analysis in later stages. Specific restaurants will be mapped using folium.

Methodology

1. Obtain and filter relevant NYC data from https://cocl.us/new_york_dataset
2. Obtain venues in each neighbourhood using Foursquare
3. Filter Indian restaurants
4. Obtain rating, tips and other parameters for said restaurants
5. Rank restaurants using data
6. Visualize ranked data using Folium

Analysis

We create a new dataframe showing average rating for every neighborhood

```
[35]: ny_neighborhood_stats=indian_rest_stats_ny.groupby('Neighborhood',as_index=False).mean()[['Neighborhood','Rating']]
      ny_neighborhood_stats.columns=['Neighborhood','Average Rating']
      ny_neighborhood_stats.sort_values(['Average Rating'],ascending=False).head(10)
```

[35]:

	Neighborhood	Average Rating
0	Astoria	9.0
61	Sunnyside	9.0
6	Blissville	9.0
14	Clinton Hill	8.8
25	Fort Greene	8.8
48	Prospect Heights	8.7
30	Greenwich Village	8.6
65	Tribeca	8.6
13	Civic Center	8.6
63	Sutton Place	8.5

Similarly, average rating per borough is visualized in a dataframe

```
[32]: ny_borough_stats=indian_rest_stats_ny.groupby('Borough',as_index=False).mean()[['Borough','Rating']]
      ny_borough_stats.columns=['Borough','Average Rating']
      ny_borough_stats.sort_values(['Average Rating'],ascending=False).head()
```

[32]:

	Borough	Average Rating
2	Manhattan	8.121212
1	Brooklyn	7.429630
0	Bronx	6.566667
3	Queens	6.478378
4	Staten Island	6.400000

Analysis

Identifying restaurant with maximum rating

```
[30]: indian_rest_stats_ny.iloc[indian_rest_stats_ny['Rating'].idxmax()]
```

```
[30]: Borough                        Queens
      Neighborhood                   Astoria
      ID               4aa56c81f964a5204e4820e3
      Name             Seva Indian Cuisine
      Likes                          239
      Rating                           9
      Tips                           133
      Name: 53, dtype: object
```

Identifying restaurant with maximum tips

```
[29]: indian_rest_stats_ny.iloc[indian_rest_stats_ny['Tips'].idxmax()]
```

```
[29]: Borough                      Manhattan
      Neighborhood                  Gramercy
      ID               4a12eb1ff964a52099771fe3
      Name                            Dhaba
      Likes                          497
      Rating                         8.3
      Tips                           164
      Name: 50, dtype: object
```
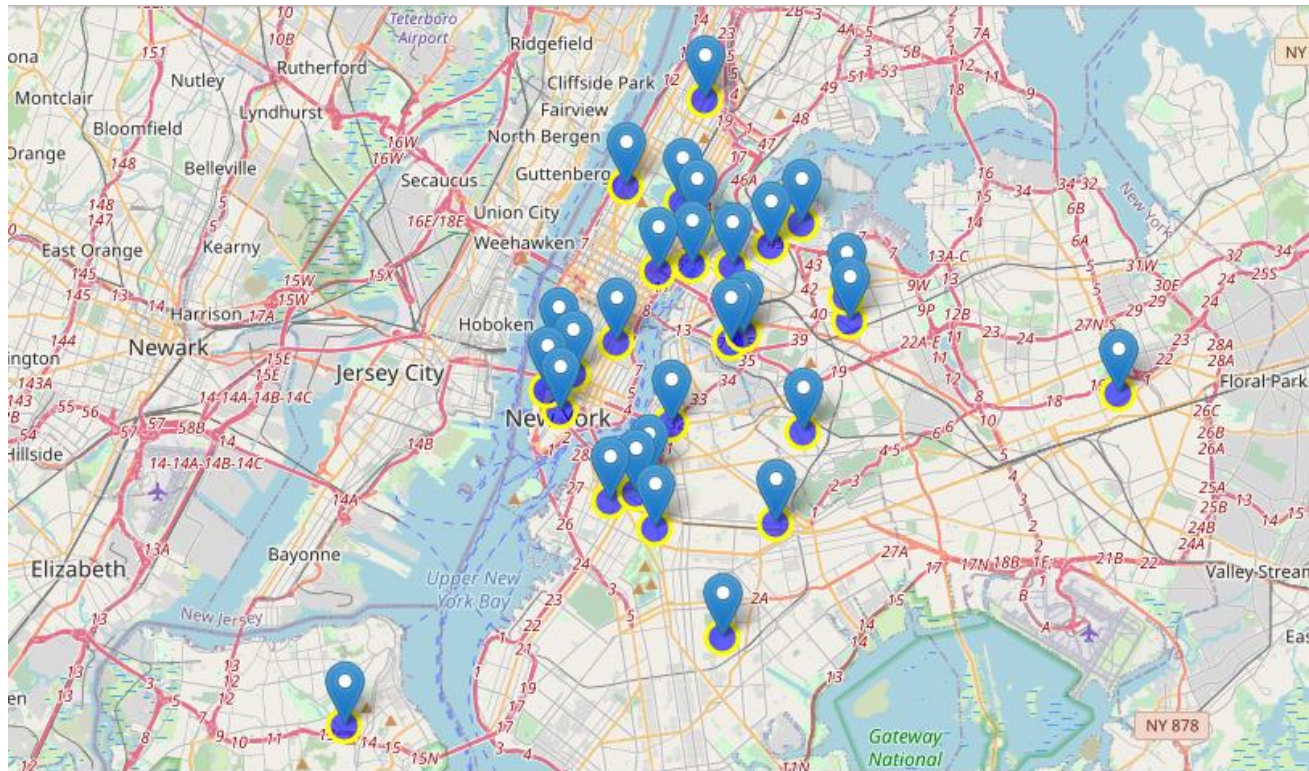
Identifying restaurant with maximum likes

```
[28]: indian_rest_stats_ny.iloc[indian_rest_stats_ny['Likes'].idxmax()]
```

```
[28]: Borough                      Manhattan
      Neighborhood                   Tribeca
      ID               4bbb9dbded7776b0e1ad3e51
      Name             Tamarind TriBeCa
      Likes                          590
      Rating                         8.6
      Tips                           148
      Name: 41, dtype: object
```
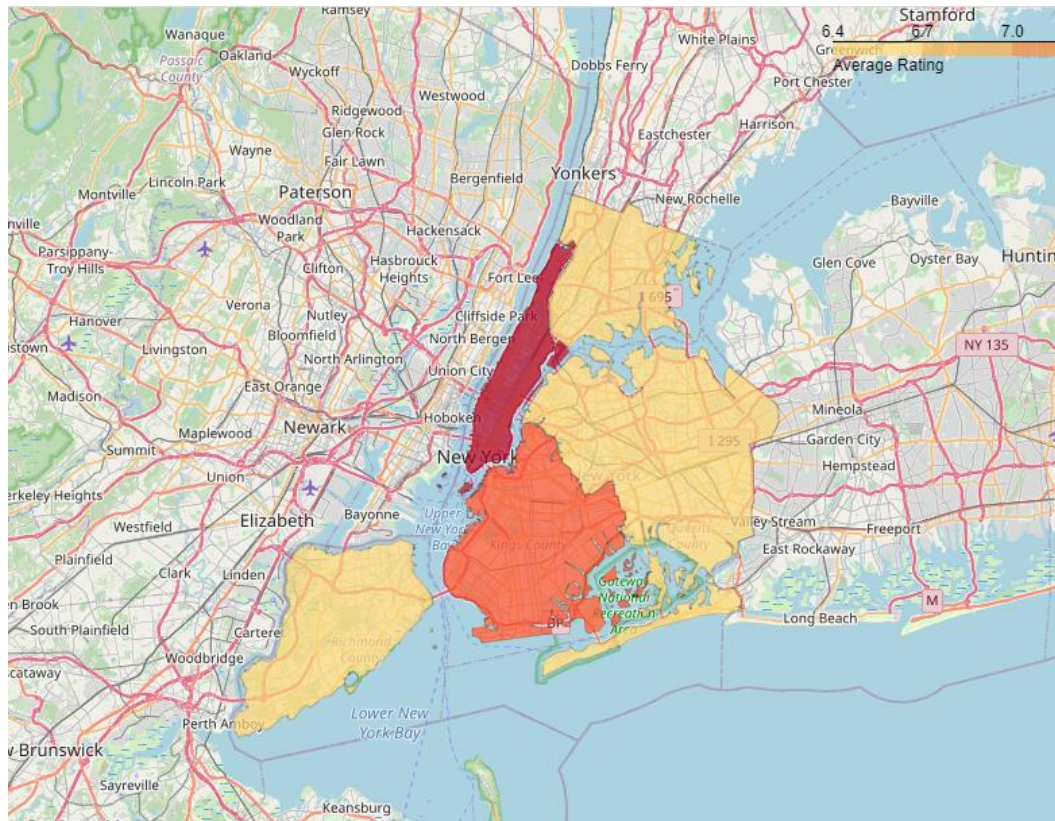
Data visualized using Folium

All neighborhoods with average rating above 8.0

Data visualized using Folium

Map of Boroughs based on rating

Conclusions

- Astoria(Queens), Blissvile(Queens) and Boerum Hill (Brooklyn) are amongst the best neighborhoods for Indian Restaurants

- Amongst boroughs, Manhattan is the best for Indian Restaurants followed by Brooklyn and Bronx

- NYC is filled with quality Indian Restaurants and also provide an outline of best neighborhoods to stay in. This analysis is useful not only for migrants interested in Indian cuisine but also individuals/groups who would like to start businesses in these areas.