Coursera Capstone Project

Indian Restaurants in NYC

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Introduction

- New York City (NYC) is largest city in the United States of America. According to the Wikipedia, the estimated (2019) population of NYC is 8.3 million [1], of which 3.1 million are immigrants [2]. It is one of the most ethnically diverse metropolises. A published article claims that there are about 710,000 Indians residing in NYC [3], which is about 9% of the total NYC population.

- Among many other things, Indians are known for their love towards spicy food. In this final project, the best locations for eating as well as opening an Indian restaurant is explored throughout NYC.

Specific Questions

- How many Indian restaurants are there in NYC and how are distributed along different neighborhoods/boroughs?
- What is the best location for Indian food in NYC?
- In which neighborhood, potential restaurant owner should invest to have best chance of success?

Data

- In order to answer above questions, the following data is needed:
  - Geospatial information of NYC, including names of neighborhoods, boroughs as well as their latitude, longitude
  - Details such as, name, ratings, of Indian restaurants in NYC.
- Above data either be scrapped from internet and/or requested from Foresquare API using python.

Methodology

- NYC geospatial data will be collected from https://cocl.us/new_york_dataset.
- Data of Indian restaurants will be requested by using Foresquare API.
- Collected data will be processed and exploratory analysis will be performed on the data.
- Cleaned data will be visualised using different python libraries.

References

[1] https://en.wikipedia.org/wiki/New_York_City

[2] https://www1.nyc.gov/assets/immigrants/downloads/pdf/moia_annual_report_2018_final.pdf

[3] https://www.novacredit.com/resources/desis-in-new-york-a-guide-for-indian-newcomers-in-new-york-city/#:~:text=New%20York%20City%20houses%20one,Indian%20residents%20as%20of%202017

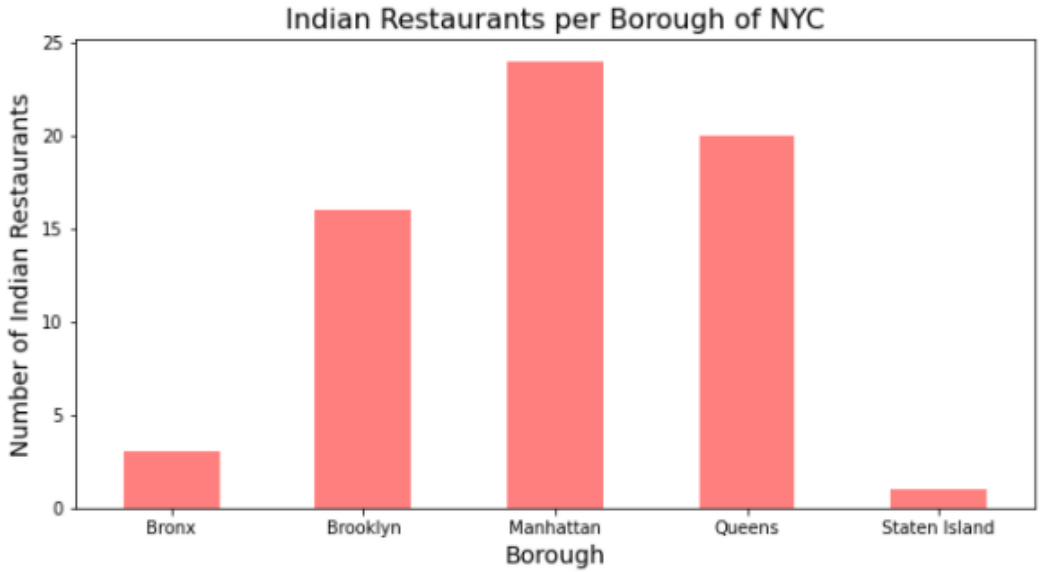
Results (1)

- Maximum number of neighborhoods are in **Queens**
- Maximum number of Indian restaurants are in **Manhattan** borough

[68]:

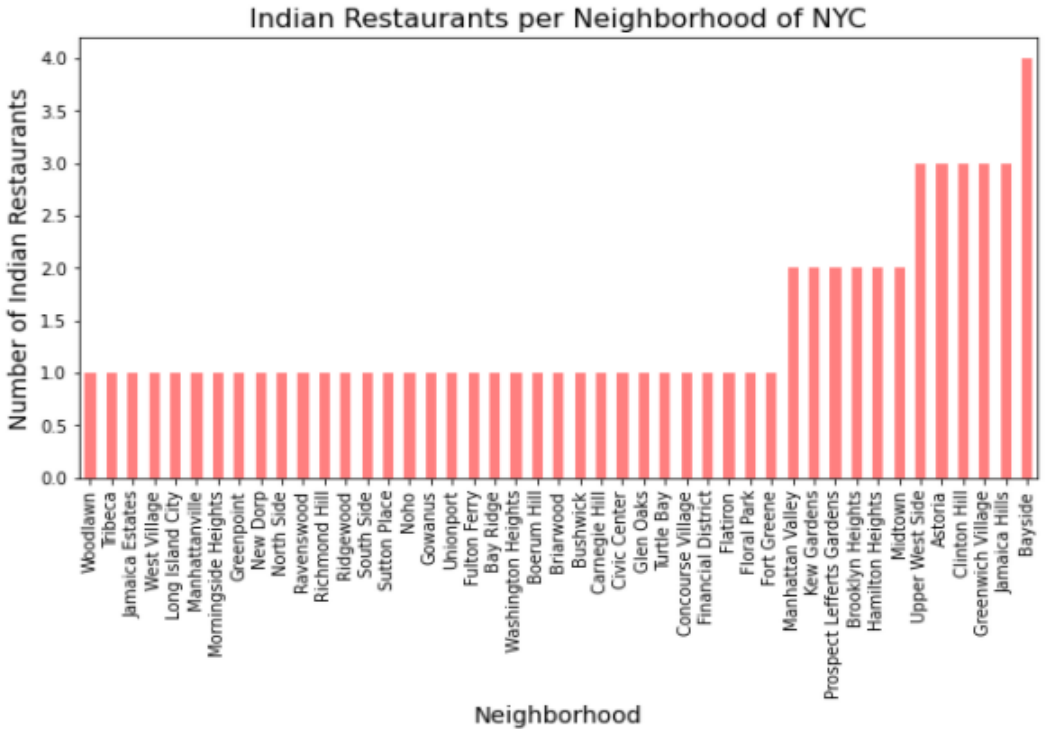
Borough	Neighborhood	Latitude	Longitude
Bronx	52	52	52
Brooklyn	70	70	70
Manhattan	40	40	40
Queens	81	81	81
Staten Island	63	63	63

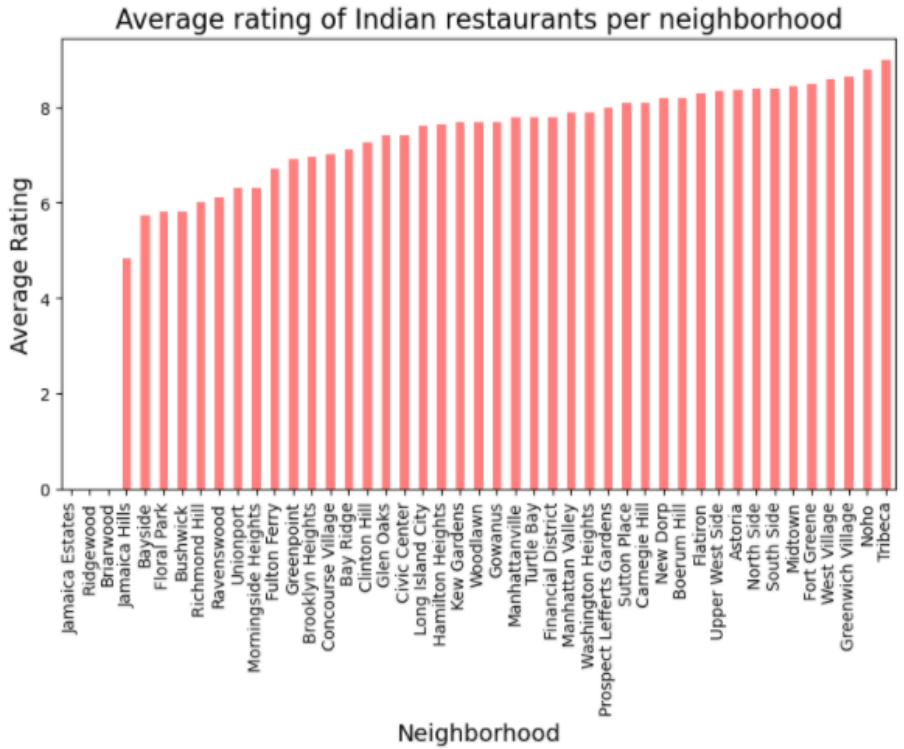
```
Borough
Bronx             3
Brooklyn         16
Manhattan        24
Queens           20
Staten Island     1
Name: ID, dtype: int64
```

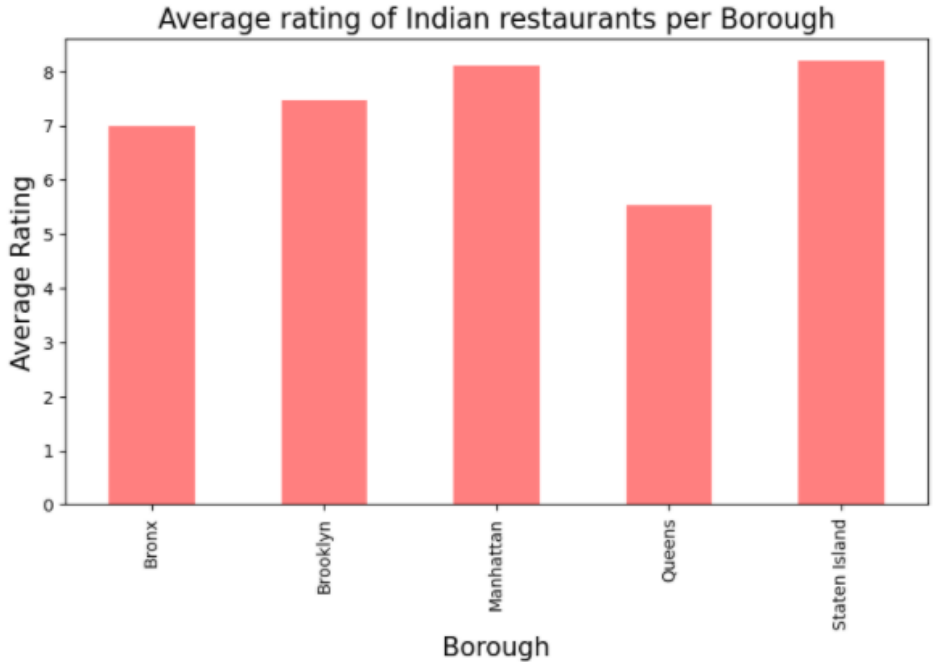


Results (2)

- Maximum number of Indian restaurants are in Bayside neighborhood
- Average rating of Indian restaurants per borough & neighborhood







Results (3)

- Indian restaurant in NYC with maximum Likes

```
Borough                        Manhattan
Neighborhood                     Midtown
ID              49d91c12f964a520015e1fe3
Name               The Kati Roll Company
Likes                                831
Rating                               8.6
Tips                                 255
Name: 24, dtype: object
```

- Indian restaurant in NYC with maximum Ratings

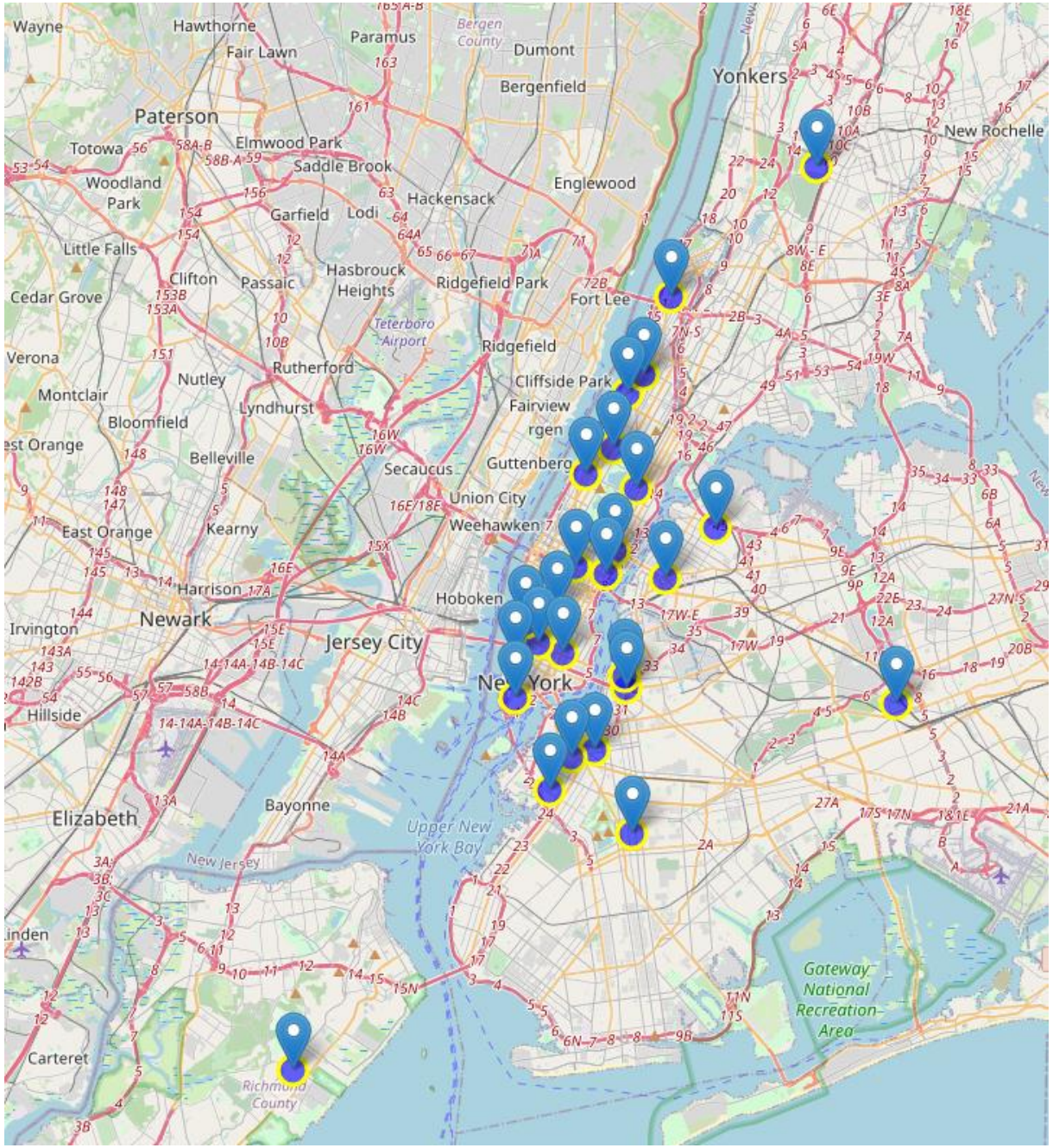
```
Borough                        Manhattan
Neighborhood                     Tribeca
ID              4bbb9dbded7776b0e1ad3e51
Name                      Tamarind TriBeCa
Likes                                600
Rating                                 9
Tips                                 150
Name: 29, dtype: object
```

- Indian resturant in NYC with maximum Tips/Comments

```
Borough                        Manhattan
Neighborhood                     Midtown
ID              49d91c12f964a520015e1fe3
Name               The Kati Roll Company
Likes                                831
Rating                               8.6
Tips                                 255
Name: 24, dtype: object
```

Results (4)

- Visualising neighborhoods having Indian restaurants of Average Rating of >7.5



Conclusions

1. Manhattan has the best rated Indian restaurants.
2. The Bronx have the least number of Indian restaurants per borough
3. Although Manhattan has the least number of neighborhoods among other boroughs, it has the greatest number of Indian restaurants.
4. Bronx and Staten island together have only 4 Indian restaurants
5. Based on the above analysis, in order to succeeded in opening Indian restaurant, it is recommended to invest in a restaurant in Bronx, especially on the border of Manhattan and Bronx. Reasons:
    a. Bronx is right next to Manhattan thus easily reachable by public transport
    b. Limited presence of Indian eateries
6. However, it must be noted that this analysis based on limited amount of data. Hence, a comprehensive analysis should be performed to reconfirm these findings.