

# Capstone Project

## Indian Restaurants in NYC


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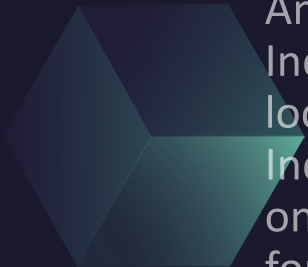
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# Introduction



New York City (NYC), is the most populous city in the United States. With an estimated 2019 population of 8,336,817, New York City is composed of five boroughs, each of which is a county of the State of New York. The city and its metropolitan area constitute the premier gateway for legal immigration to the United States, which has a larger immigrant population than any other country, with 47 million immigrants as of 2015. A published article claims that there are about 710,000 Indians residing in NYC, which is about 9% of the total NYC population.



Among many other things, Indians are known for their love towards Indian flavoursome, spicy food. In this final project, the best locations for eating & ordering out Indian as well as opening an Indian restaurant is explored throughout NYC. Hence this will not only benefit the Indians and the diverse cultured people who are fond of Indian food, but also can be a guide to newcomers into the NYC.

# Discussion Module

- How many Indian restaurants are there in NYC and how are they distributed along different neighbourhoods/boroughs?
- Which are the best locations to find Indian food joints in NYC?
- In which areas do the newcomer Indians decide to reside?
- In which neighbourhood should a potential restaurant owner invest to have best chance of success?

# Sample

In order to answer above questions, the following data is needed:

- Geospatial information of NYC, including names of neighbourhoods, boroughs as well as their geodata( latitude, longitude).
- Details such as name,menu,ratings of Indian restaurants in NYC.

Above information can either be gathered from internet and/or requested from Foresquare API using python and geopy data

# Methodology

1. NYC geospatial data will be collected from [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset).
2. Data of Indian restaurants will be requested by using Foresquare API and Geopy map.
3. Collected data will be processed and exploratory analysis will be performed on the data.
4. Cleaned data will be visualised using different python libraries.

# References

1. [https://en.wikipedia.org/wiki/New\\_York\\_City](https://en.wikipedia.org/wiki/New_York_City)
2. [https://www1.nyc.gov/assets/immigrants/downloads/pdf/moia\\_annual\\_report\\_2018\\_final.pdf](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 of the Analysis

1. Maximum number of neighbourhoods are in Queens.

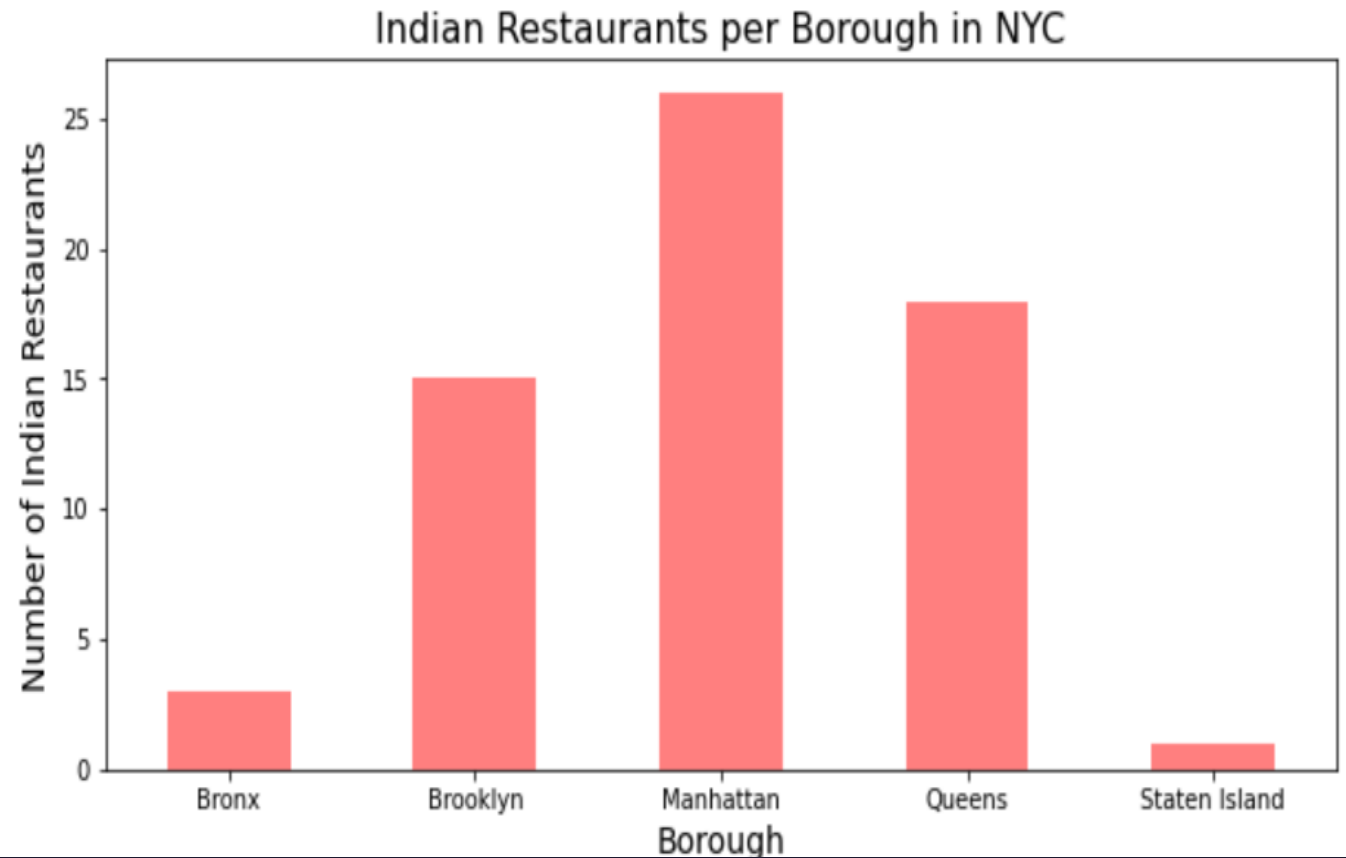
[7]:

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

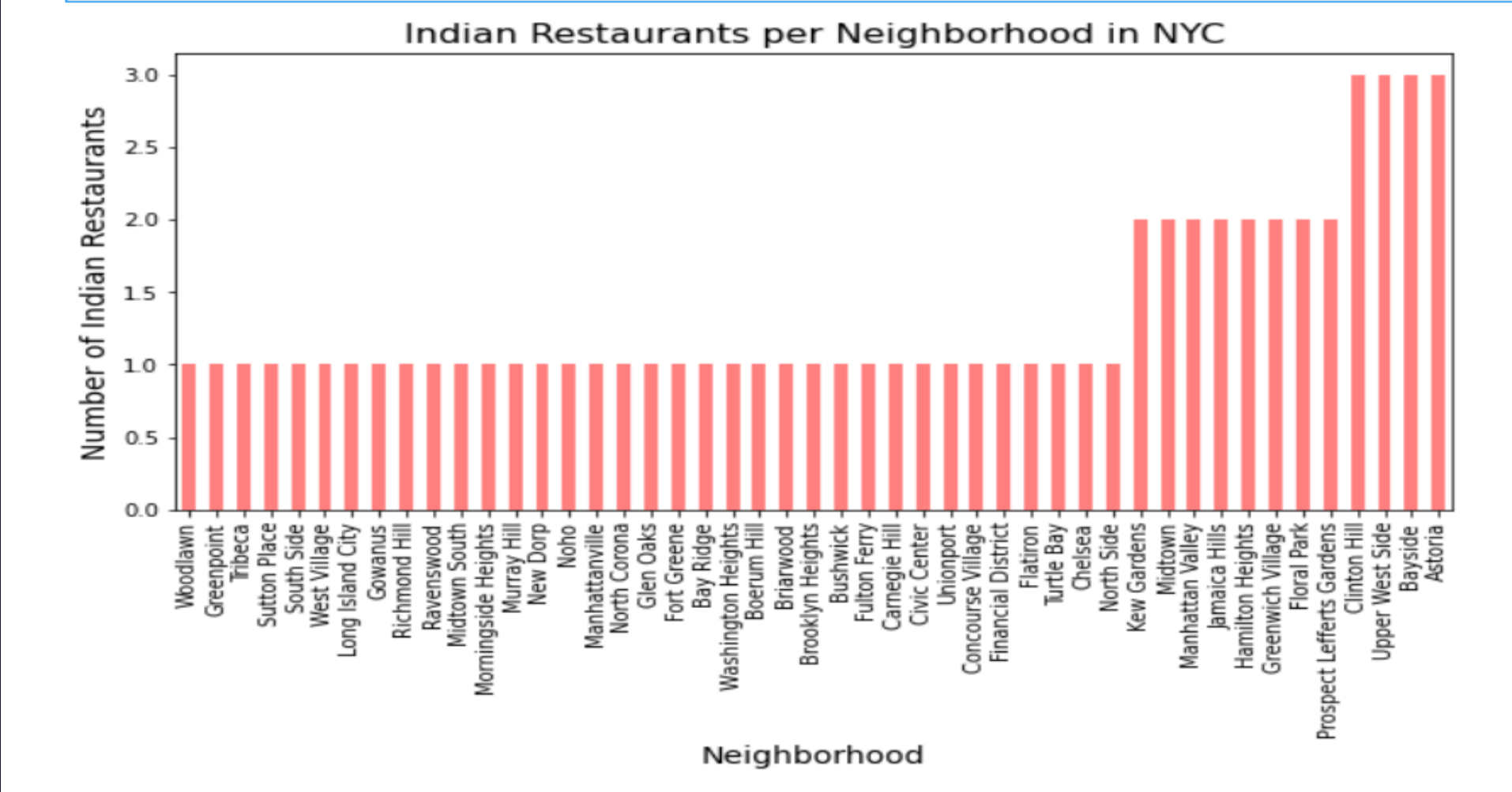


2. Maximum number of Indian restaurants are in Manhattan Borough.

```
[19]: Borough  
      Bronx      3  
      Brooklyn  15  
      Manhattan 26  
      Queens   18  
      Staten Island 1  
      Name: ID, dtype: int64
```



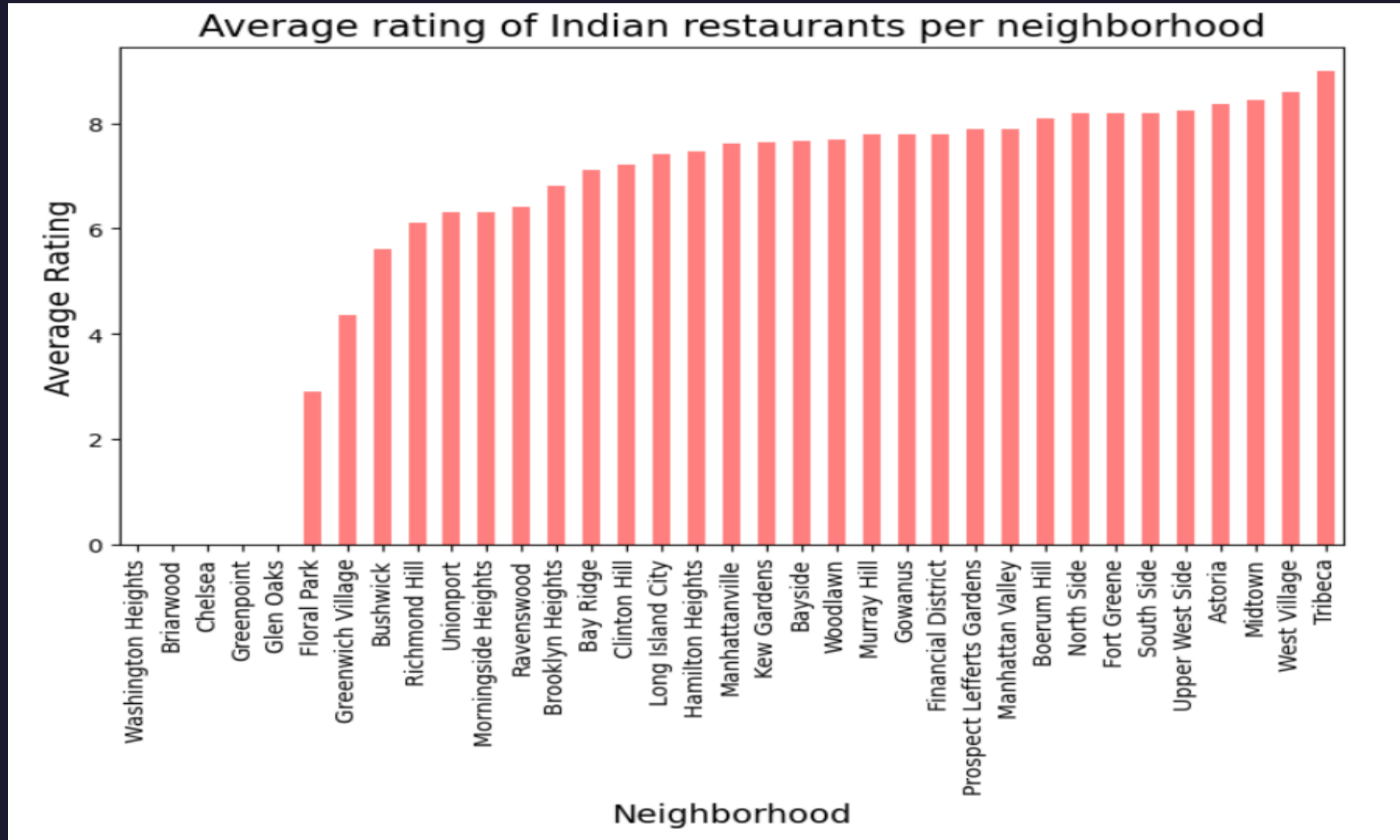
3. Maximum number of Indian restaurants in NYC neighbourhoods.



#### 4. Average rating of Indian restaurants per Borough.



## 5. Average ratings of Indian restaurants per neighbourhood.



# Best Location(s) to enjoy Indian cuisine in NYC

- Indian Restaurant in NYC with maximum Likes.

```
[33]: Borough      Manhattan  
      Neighborhood Midtown  
      ID      49d91c12f964a520015e1fe3  
      Name      The Kati Roll Company  
      Likes      830  
      Rating      8.7  
      Tips      255  
      Name: 23, dtype: object
```

- Indian Restaurant in NYC with maximum Ratings.

```
[34]: Borough      Manhattan  
      Neighborhood Tribeca  
      ID      4bbb9dbded7776b0e1ad3e51  
      Name      Tamarind TriBeCa  
      Likes      601  
      Rating      9  
      Tips      150  
      Name: 29, dtype: object
```

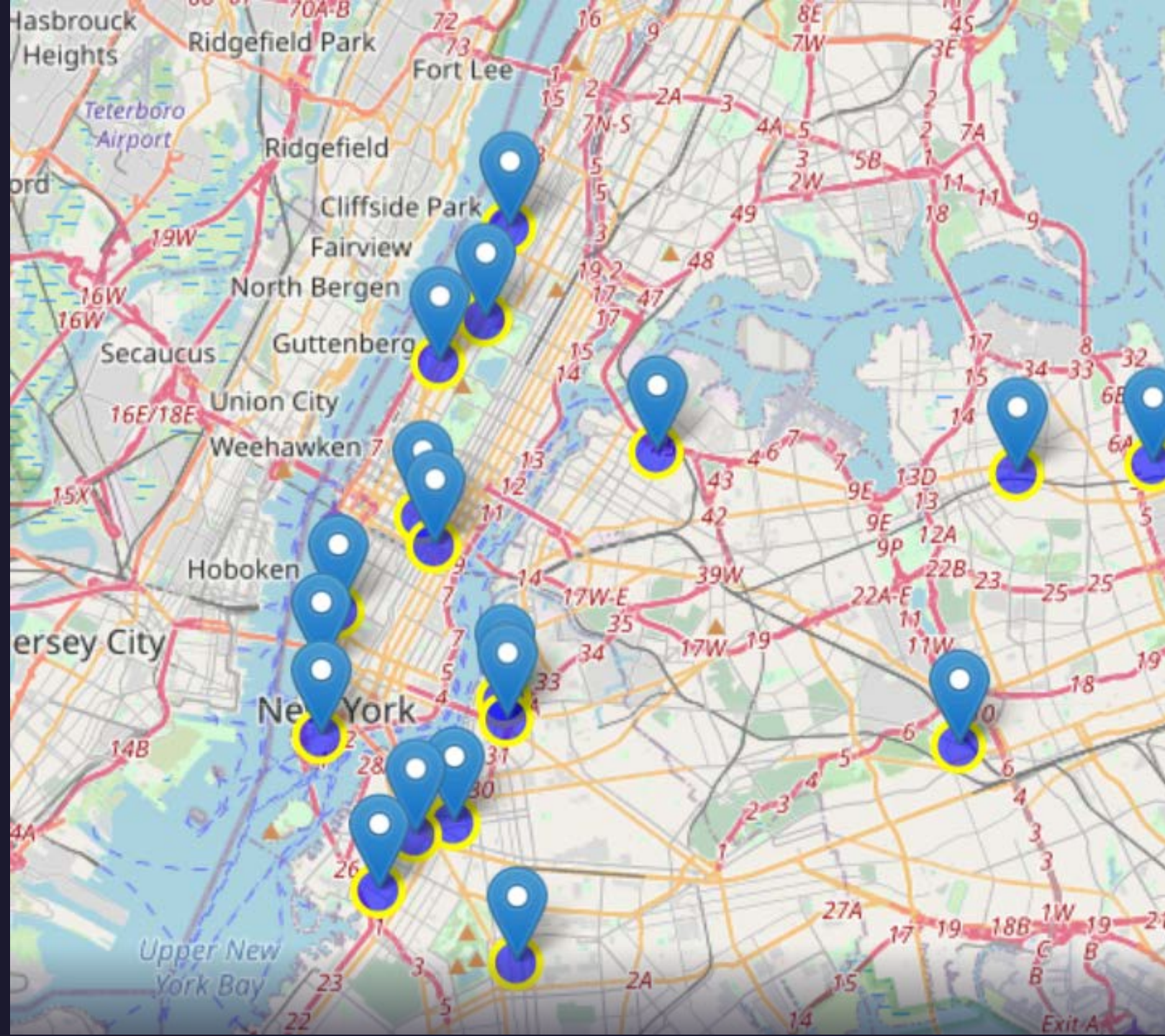
- Indian Restaurant in NYC with maximum Tips/Comments.

```
[35]: Borough      Manhattan  
      Neighborhood  Midtown  
      ID            49d91c12f964a520015e1fe3  
      Name          The Kati Roll Company  
      Likes         830  
      Rating        8.7  
      Tips          255  
      Name: 23, dtype: object
```



## Data Visualization of Neighbourhoods with Indian restaurants having Average rating of $>7.5$

- The map here shows the Indian restaurants in different boroughs with an average rating of more than 7.5.
- **Manhattan** has the least number of neighbourhoods among other boroughs, it has the greatest number of Indian restaurants.
- **Bronx** has the least number of Indian restaurants per borough



# Conclusion

1. **Manhattan** has the best rated Indian restaurants.
2. Although Manhattan has the least number of neighbourhoods among other boroughs, it has the greatest number of Indian restaurants.
3. The **Bronx** has the least number of Indian restaurants per borough
4. Bronx and Staten island together have only 4 Indian restaurants
5. Based on the above analysis, in order to successfully venture into opening an Indian restaurant, it is recommended to invest in a restaurant in **Bronx**, especially on the border of Manhattan and Bronx, reason being:
  - a) Bronx is right next to Manhattan thus easily reachable by public transport.
  - b) Limited presence of Indian eateries, although average likes and ratings of the existing Indian joints.
6. However, it must be noted that this analysis is based on limited data. Hence, a comprehensive analysis should be performed to reconfirm these findings.