# CAPSTONE – FINAL REPORT
# NELSON VALDIVIESO

## Introduction

New York City's demographics show that it is a large and ethnically diverse metropolis. It is the largest city in the United States with a long history of international immigration. New York City was home to nearly 8.5 million people in 2014, accounting for over 40% of the population of New York State and a slightly lower percentage of the New York metropolitan area, home to approximately 23.6 million. Over the last decade the city has been growing faster than the region. The New York region continues to be by far the leading metropolitan gateway for legal immigrants admitted into the United States.

Throughout its history, New York City has been a major point of entry for immigrants; the term "melting pot" was coined to describe densely populated immigrant neighborhoods on the Lower East Side. As many as 800 languages are spoken in New York, making it the most linguistically diverse city in the world. English remains the most widely spoken language, although there are areas in the outer boroughs in which up to 25% of people speak English as an alternate language, and/or have limited or no English language fluency. English is least spoken in neighborhoods such as Flushing, Sunset Park, and Corona. With its diverse culture, comes diverse food items. There are many restaurants in New York City, each belonging to different categories like Chinese, Indian, French etc. So as part of this project, we will list and visualize all major parts of New York City that has great Indian restaurants.

## Data

New York City data that contains list Boroughs, Neighborhoods along with their latitude and longitude. 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 neighborhoods of New York city. Indian restaurants in each neighborhood of New York city. Data source: Foursquare API Description: By using this API we will get all the venues in each neighborhood. We can filter these venues to get only Indian restaurants.
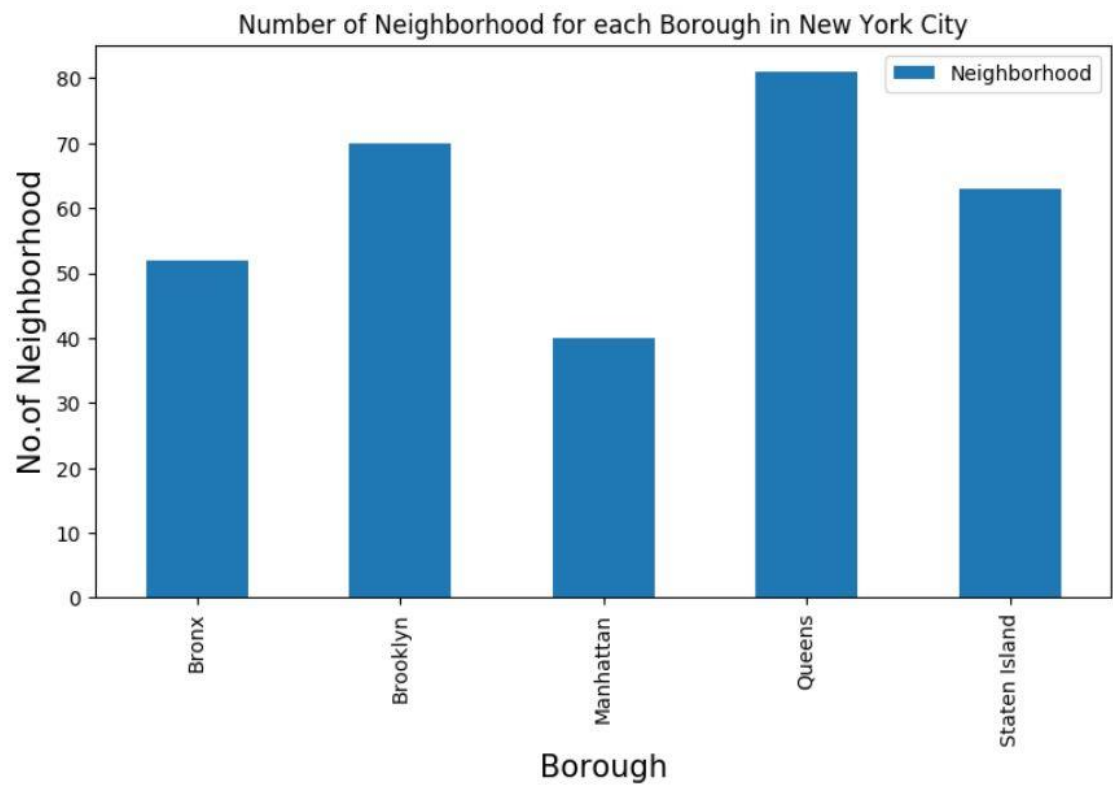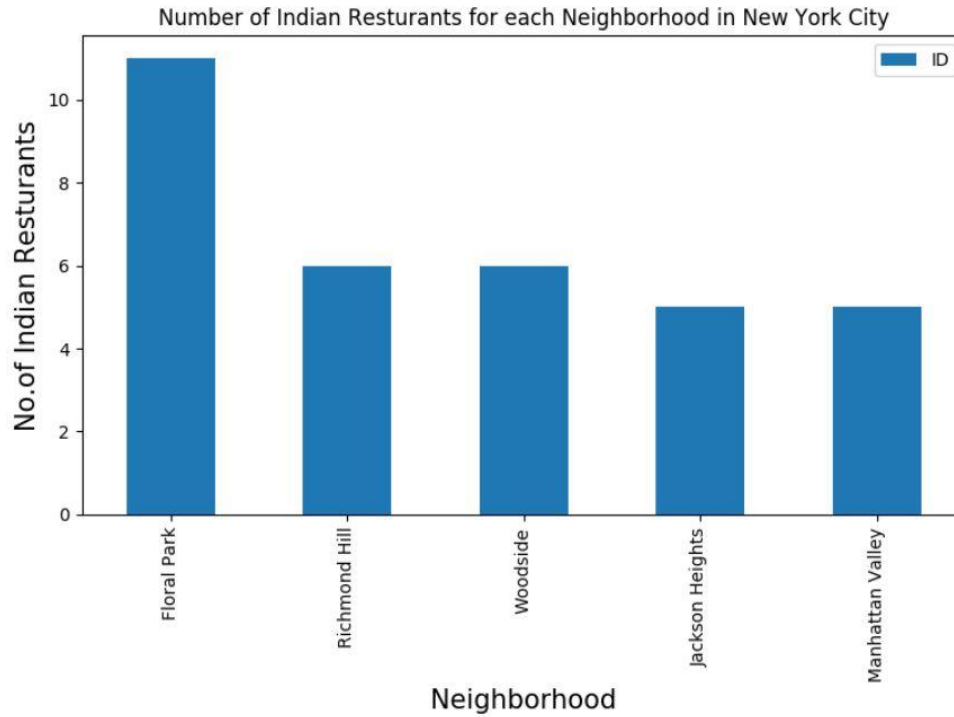
## Methodology

First step was to load data from https://cocl.us/new_york_dataset in pandas Data frame and Getting Latitude and Longitude for each address geopy library. Second step, was to filter out which Borough and Neighborhood have maximum number of Indian Restaurants using Foursquare API. Finally, Get likes, ratings, tips on each of Indian Restaurant using Foursquare API

## Required Libraries

pandas and numpy for handling data.
request module for using FourSquare API.
geopy to get co-ordinates of City of New York.
folium to visualize the results on a map

**Results**

Number of Neighborhood for each Borough in New York City



Number of Indian Resturants for each Borough in New York City

Number of Indian Resturants for each Neighborhood in New York City

List of restaurants in Floral Park

|  | Borough | Neighborhood | ID | Name |
|---|---|---|---|---|
| 103 | Queens | Floral Park | 4e4e3e22bd4101d0d7a5c2d1 | Kerala Kitchen |
| 104 | Queens | Floral Park | 4b647b56f964a520c4b62ae3 | Usha Foods & Usha Sweets |
| 105 | Queens | Floral Park | 527ffc0811d2d329d5e49abd | Jackson Diner |
| 106 | Queens | Floral Park | 4b787c49f964a5209cd12ee3 | Santoor Indian Restaurant |
| 107 | Queens | Floral Park | 4c0c01e0bbc676b00d6b4cd5 | Mumbai Xpress |
| 108 | Queens | Floral Park | 4c76ff35a5676dcb72671721 | Flavor Of India |
| 109 | Queens | Floral Park | 4df0f39dd4c04d0392c853ea | Sagar Chinese |
| 110 | Queens | Floral Park | 571af96a498e9e392d8d3786 | Namaste Authenic Indian Cuisine |
| 111 | Queens | Floral Park | 55d68c1b498ecf05fa196fe1 | Namaste Restaurant and Cafe |
| 112 | Queens | Floral Park | 4c3e17f2ca012d7f82022fbe | Mushin's Halal Food [Gyro Cart] |
| 113 | Queens | Floral Park | 4e6bfe1c7d8b2c711b17bbe5 | Surya sweets and snacks |

Likes, ratings, tips on each of Indian Restaurant using foursquare API

| | Borough | Neighborhood | ID | Name | Likes | Rating | Tips |
|---|---------|--------------|-----|------|-------|--------|------|
| 0 | Bronx | Woodlawn | 4c0448d9310fc9b6bf1dc761 | Curry Spot | 4 | 8.1 | 11 |
| 1 | Bronx | Parkchester | 4c194631838020a13e78e561 | Melanies Roti Bar And Grill | 3 | 6.0 | 2 |
| 2 | Bronx | Spuyten Duyvil | 4c04544df423a593ac83d116 | Cumin Indian Cuisine | 13 | 6.1 | 9 |
| 3 | Bronx | Concourse | 551b7f75498e86c00a0ed2e1 | Hungry Bird | 8 | 6.9 | 3 |
| 4 | Bronx | Unionport | 4c194631838020a13e78e561 | Melanies Roti Bar And Grill | 3 | 6.0 | 2 |

Restaurant with higher ranking

```
# Resturant with maximum Likes
indian_rest_stats_ny.iloc[indian_rest_stats_ny['Likes'].idxmax()]
```

```
Borough                       Manhattan
Neighborhood                    Midtown
ID                49d91c12f964a520015e1fe3
Name              The Kati Roll Company
Likes                             836
Rating                            8.8
Tips                              259
Name: 41, dtype: object
```

Restaurant having maximum Rating

```
# Resturant with maximum Rating
indian_rest_stats_ny.iloc[indian_rest_stats_ny['Rating'].idxmax()]
```

```
Borough                       Manhattan
Neighborhood                    Tribeca
ID                4bbb9dbded7776b0e1ad3e51
Name              Tamarind TriBeCa
Likes                             586
Rating                              9
Tips                              145
Name: 45, dtype: object
```

## Conclusion

Manhattan have potential Indian Restaurant Market, Manhattan is the best place to stay if you prefer Indian Cuisine. Staten Island ranks last in average rating of Indian Restaurants. Astoria (Queens), Bliss Ville (Queens), Civic Center (Manhattan) are some of the best neighborhoods for Indian cuisine.