

# Battle of Neighborhoods

A short presentation on the evaluation of best neighborhoods in New York to migrate to, specific to the Indian community.

By,  
Rajesh Wilson  
B.Tech Computer Science

# Background

- Every year around 60000 plus Indians migrate to the US.
- After Mexico and China, India was the third largest country of origin for new lawful permanent residents (LPRs) in FY 2015
- Indians are highly educated (72%) with bachelor's degrees or above compared to other U.S. Asians (51%) and General U.S. population (30%)
- They have the highest median household income (\$100k) among U.S. Asians (\$73k) compared with general U.S. population (\$53.6k)

## Reason for this influx:

- Economic prosperity
- Educational facilities
- Quality of life

# Problem at hand

- To address the conundrum of choosing a place to migrate, from the point of view of the Indian community, we shall at an example of New York for now.
- Some of the factors affecting the choice of place to migrate to:
  1. Presence of a community of the same kind.
  2. Real estate / Rental prices
  3. Proximity to educational institutions
  4. Hospitals and Clinics
  5. Crime rate
  6. Proximity to restaurants, grocery stores, entertainment zones, etc.
- We shall be looking at a sub-set of these factors to determine the best neighborhoods in New York to migrate to.

# Data used

## 1. Population density of Indian-Americans in New York

Rank ↕	Borough ↕	City ↕	Indian Americans ↕	Density of Indian Americans per square mile ↕
1	Queens (2014) <sup>[32]</sup>	New York City	144,896	1,326.5
2	Brooklyn (2012)	New York City	25,270	357.9
3	Manhattan (2012)	New York City	24,359	1,060.9
4	The Bronx (2012)	New York City	16,748	398.6
5	Staten Island (2012)	New York City	6,646	113.6
	Total (2014) <sup>[30]</sup>	<b>New York City</b>	227,994	753.4

- The above table was scraped from a Wikipedia page and Queens was selected for further evaluation since it had the highest density.
- Only one borough was selected for the sake of simplicity.

Source: [https://en.wikipedia.org/wiki/Indians\\_in\\_the\\_New\\_York\\_City\\_metropolitan\\_region](https://en.wikipedia.org/wiki/Indians_in_the_New_York_City_metropolitan_region)

# ..Data used

## 2. Home rental rates

Search:

Neighborhood	Borough	Two-Bedroom Median Rent
Murray Hill	Queens	\$2,300.00
College Point	Queens	\$2,550.00
Woodside	Queens	\$2,199.50
East Flushing	Queens	\$2,350.00
Queensboro Hill	Queens	\$2,200.00
Pomonok-Flushing Heights-Hillcrest	Queens	\$1,975.00
Steinway	Queens	\$2,400.00
Baisley Park	Queens	\$2,325.00

- Median home rental rates were scraped from [www.renthop.com](http://www.renthop.com) for Queens borough
- The data was sorted and top 10 neighborhoods were selected for further evaluation.
- Source: <https://www.renthop.com/study/assets/new-york-city-cost-of-living-2017/nyc-2br-median-rent-and-income-table.html>

# ..Data used

## 3. Venues around Queens neighborhood

- Foursquare api was used to explore the venues around the top 10 neighborhoods scraped from the previous data table.
- Due to the limited potential of Foursquare only the count of category of venues was considered for evaluation. Higher the number of venue categories, better the location.

	Neighborhood	Venue_Category_Count
0	Ozone Park	35
1	Kew Gardens Hills	21
2	Hillcrest	18
3	Utopia	18
4	Fresh Meadows	16
5	Pomonok	15
6	Middle Village	15
7	South Ozone Park	12
8	Whitestone	4
9	Glendale	4

# ..Data used

## 4. Crime rate

- Crime data with respect to Queens neighborhoods was scraped from the following source:  
[https://www.brickunderground.com/blog/2014/07/address\\_report\\_safest\\_and\\_least\\_safe\\_neighborhoods](https://www.brickunderground.com/blog/2014/07/address_report_safest_and_least_safe_neighborhoods)
- Since the data available was limited, top 5 neighborhoods were chosen for the final evaluation.

### QUEENS

<i>Safest Neighborhoods</i>	<i>Non-violent crimes per 1,000 residents</i>
Bellerose	2.48
Glen Oaks	3.96
Pomonok	3.98
Beechurst/Whitestone	4.83
Corona	5.13
Little Neck	5.52
Rego Park	5.75
Belle Harbor	5.87
East Flushing	5.91
Murray Hill	5.95

# Data Merge

- Finally, all relevant data was merged to form a single data-frame depicting rental rates, crime rate, and venue category counts of the top 5 neighborhoods in Queens

	Borough	Neighborhood	Latitude	Longitude	Two-Bedroom Median Rent	Crime_Per_1000	Venue_Category_Count
0	Queens	Whitestone	40.781291	-73.814202	1950.0	4.83	4
1	Queens	Pomonok	40.734936	-73.804861	1975.0	3.98	15
2	Queens	Ozone Park	40.680708	-73.843203	2000.0	14.4	35
3	Queens	South Ozone Park	40.668550	-73.809865	2000.0	10.7	12
4	Queens	Kew Gardens Hills	40.722578	-73.820878	2050.0	10.9	21



# Scoring and Sorting

- The MinMaxScaler from sklearn.preprocessing was used to normalize the values of rental rates, crime rate and venue categories.
- Normalized values of rental rates and crime rate had to be deducted from 1 to represent the true score, since lower crime rate/rent rate should hold higher score.
- Finally, all individual values were added to arrive at final score, which was sorted to display the top 5 neighborhoods.

	Borough	Neighborhood	Latitude	Longitude	Two-Bedroom Median Rent	Crime_Per_1000	Venue_Category_Count	Total_Score
1	Queens	Pomonok	40.734936	-73.804861	0.75	1.000000	0.354839	2.104839
0	Queens	Whitestone	40.781291	-73.814202	1.00	0.918426	0.000000	1.918426
2	Queens	Ozone Park	40.680708	-73.843203	0.50	0.000000	1.000000	1.500000
3	Queens	South Ozone Park	40.668550	-73.809865	0.50	0.355086	0.258065	1.113151
4	Queens	Kew Gardens Hills	40.722578	-73.820878	0.00	0.335893	0.548387	0.884280

# Conclusion

- From the final score it can be implied that Pomonok can be considered a good place to migrate since it has the right blend of lower crime and rental rates and popular for the venues around it.
- This was a very crude method to evaluate the criteria to move to a place based on very limited factors.
- The factors could not be expanded due to the limited potential of Foursquare API to correctly identify venues that could potentially affect ones choice of place, like proximity to Hospitals, Schools, Libraries, etc., with far more advanced way of scoring and ranking places based on these factors.

# Sources

- <https://www.migrationpolicy.org/article/indian-immigrants-united-states>
- [https://en.wikipedia.org/wiki/Immigration\\_to\\_the\\_United\\_States](https://en.wikipedia.org/wiki/Immigration_to_the_United_States)
- <https://www.brookings.edu/wp-content/uploads/2018/01/indian-migration-to-the-us.pdf>
- <https://www8.gsb.columbia.edu/articles/chazen-global-insights/singular-population-indian-immigrants-america>
- [https://en.wikipedia.org/wiki/Indians\\_in\\_the\\_New\\_York\\_City\\_metropolitan\\_region](https://en.wikipedia.org/wiki/Indians_in_the_New_York_City_metropolitan_region)
- <https://www.renthop.com/study/assets/new-york-city-cost-of-living-2017/nyc-2br-median-rent-and-income-table.html>
- [https://www.brickunderground.com/blog/2014/07/address\\_report\\_safest\\_and\\_least\\_safe\\_neighborhoods](https://www.brickunderground.com/blog/2014/07/address_report_safest_and_least_safe_neighborhoods)