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# The Battle of Neighborhoods

Capstone Project

Coursera IBM Data Science Professional Certificate

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# Problem Statement

- Understand the similarities and dissimilarities between the neighborhoods of Scarborough borough, Toronto, CA and Queens borough, New York city, USA
- Select the best neighborhood for a Fortune 500 company to move its headquarters based on the diversity of the venues offered so that the company's employees and their families can settle comfortably.

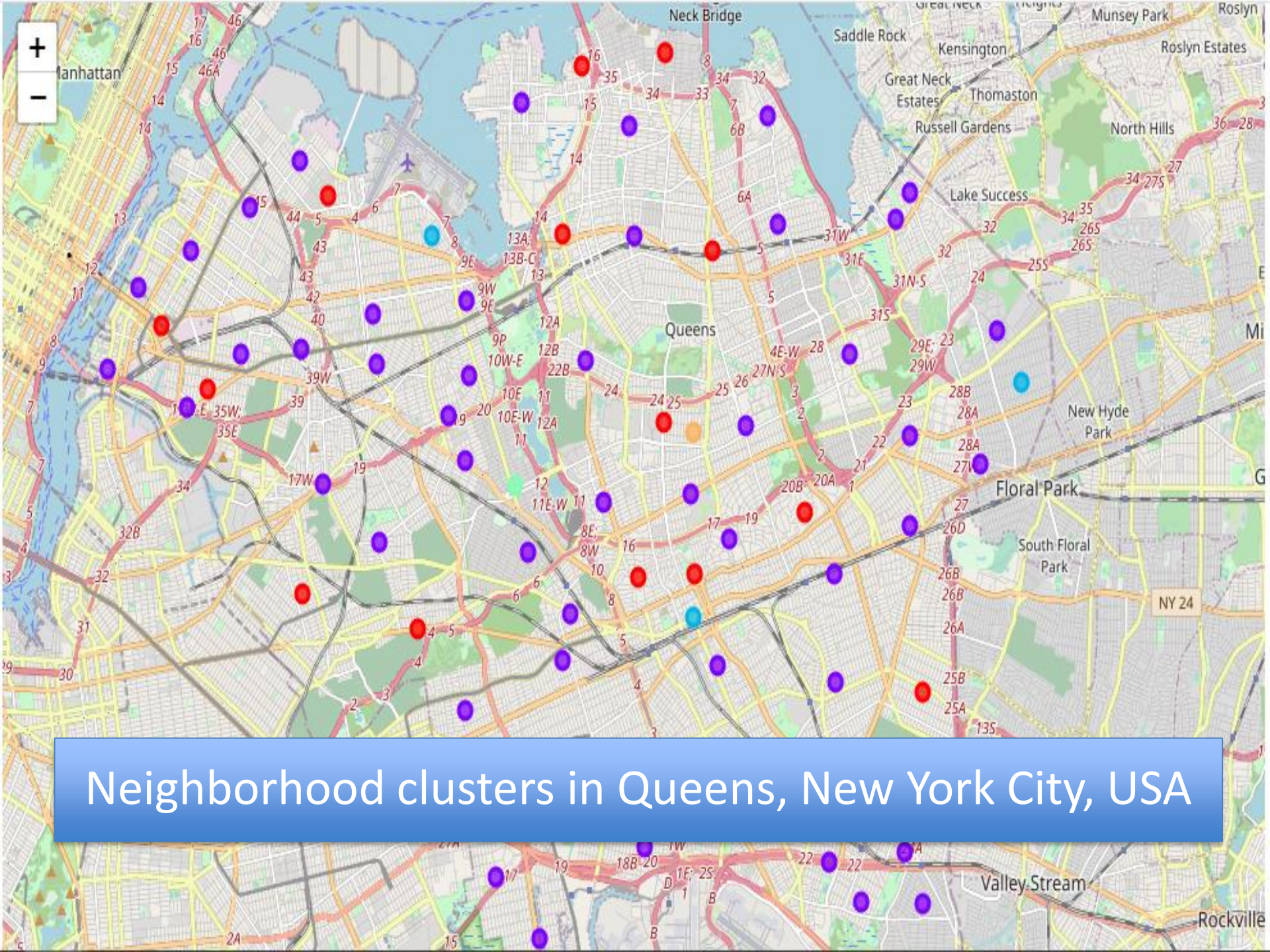
# Objective

- Collect the borough and neighborhood data for Toronto and New York city.
- Transform the data in a way such that it is uniform and can be utilized for the data analysis.
- Identify the top venues in the neighborhoods using the Four-Square API.
- Apply unsupervised machine learning technique of K-Means Clustering on the neighborhood data using the identified top venues for each neighborhood.
- Identify and understand the similarities and dissimilarities between the 2 selected boroughs i.e. Scarborough and Queens to obtain insights into their neighborhoods.



Neighborhood clusters in Scarborough, Toronto, CA





Neighborhood clusters in Queens, New York City, USA

# Comparison between Scarborough and Queens

- Scarborough has 79 distinct venues in 52 categories.
- The most common venues in Scarborough are Coffee shops, Fast food joints, International cuisine restaurants, Skating rinks
- Queens has 2097 distinct venues all together from the comprising 81 neighbourhoods
- The most common venues in Queens are shopping malls, banks, parks, coffee shops, fast food joints, international cuisine restaurants, entertainment places, pharmacy.



# Conclusion

Based on the quantity of venues and variety of venues, I would choose Queens over Scarborough as a choice to relocate the headquarters of the Fortune 500 company. Queens offers way more in choices for restaurants, gyms, grocery stores, and extracurricular activities for individuals and families of the company employees. It can be assumed that people staying in Queens can lead comfortable lifestyle.

**THANK YOU**