THE BATTLE OF NEIGHBORHOOD

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Why this project?

- Many times in our lives we have to change places whether for our studies, jobs or we have to buy a home ,or to start a business in a unfamiliar place .
- We are very likely to have very less knowledge about that area.
- This project will help everyone who wants to get familiar with new places.
- This project will be a huge help in Real Estate Also.

Objective

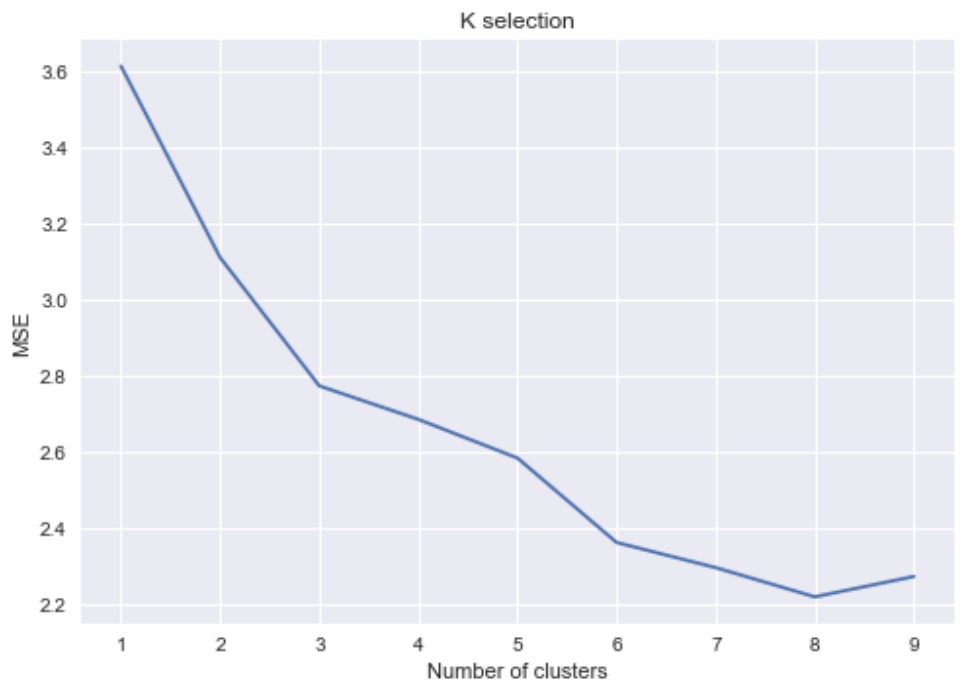
- This project will particularly be able to show similarities in terms of neighbourhood in order to help a user decide in which area of Toronto to move to.

Approach

- 1. Neighbourhoods data is gathered .
- Foursquare API is used to explore, search or locate nearby venues.
- Categories of venues are encoded using One Hot
- Clustering is performed using K-means algorithm
- The best value for k is selected using elbow method
- Various kinds of plots are used for visualization.

Geographical Location

Selecting ‘k’



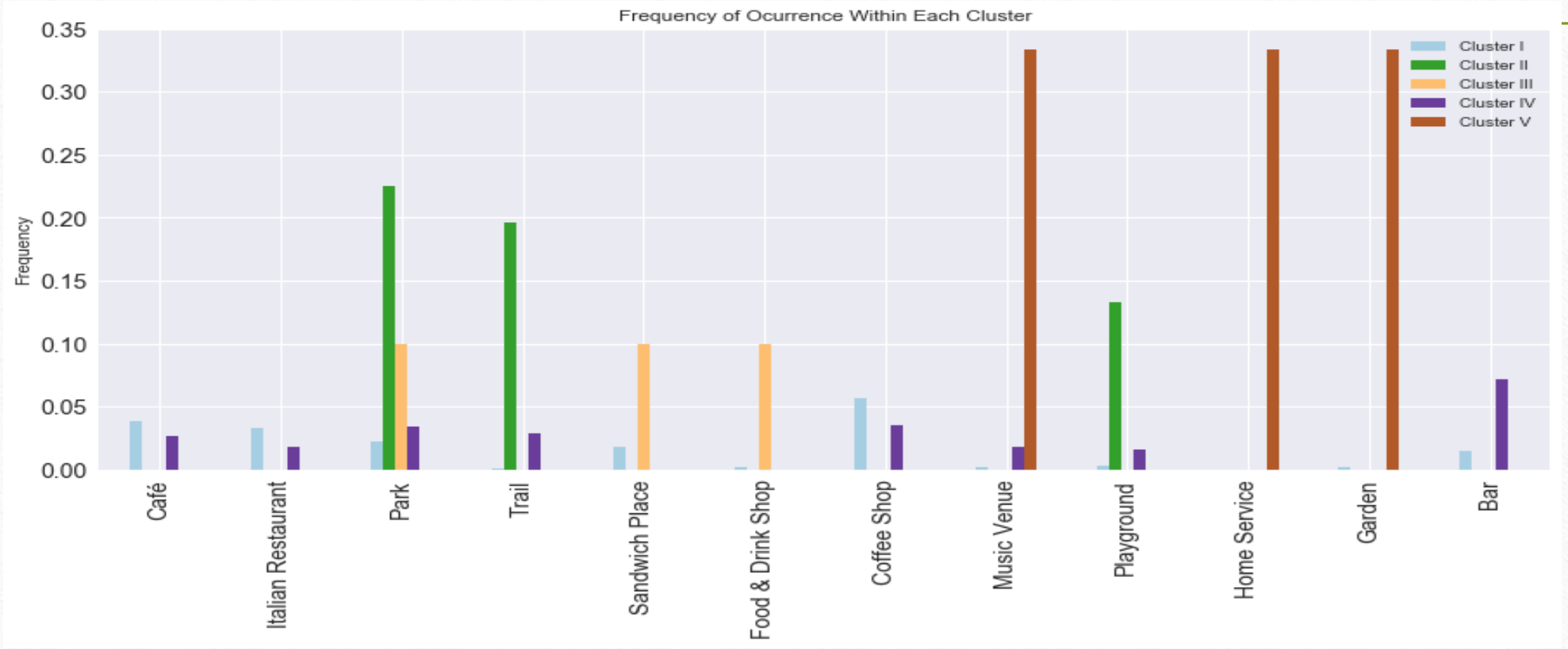
The best value for k is 5.
As elbow is located here.
therefore we’ll be taking 5 Clusters.
This will give the best accurate clustering

Geographical location after Clustering

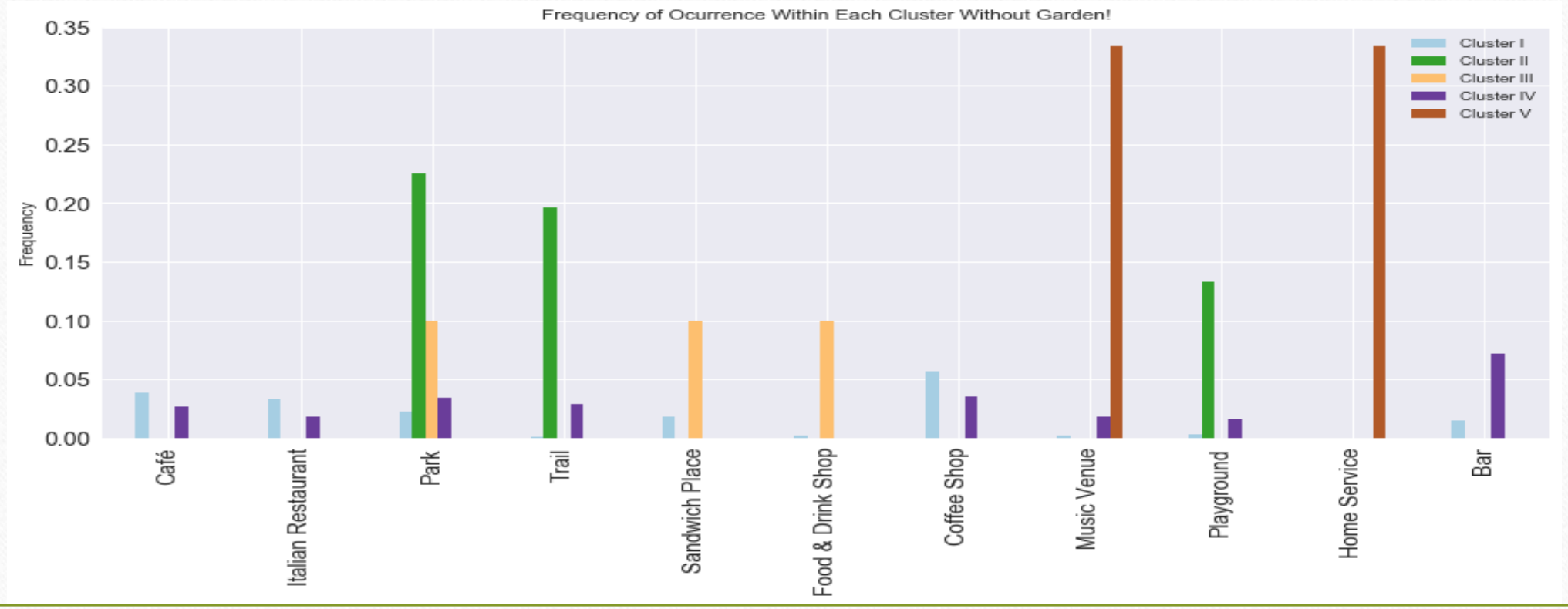
Toronto

Manhattan

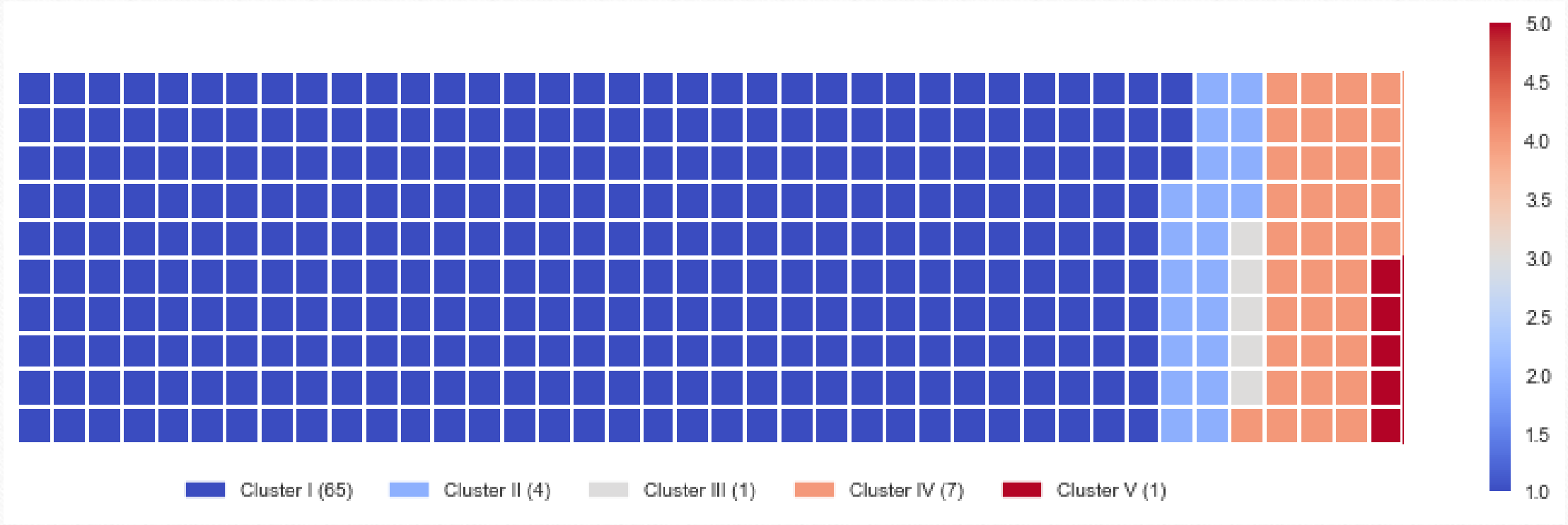
Most Frequent Venues



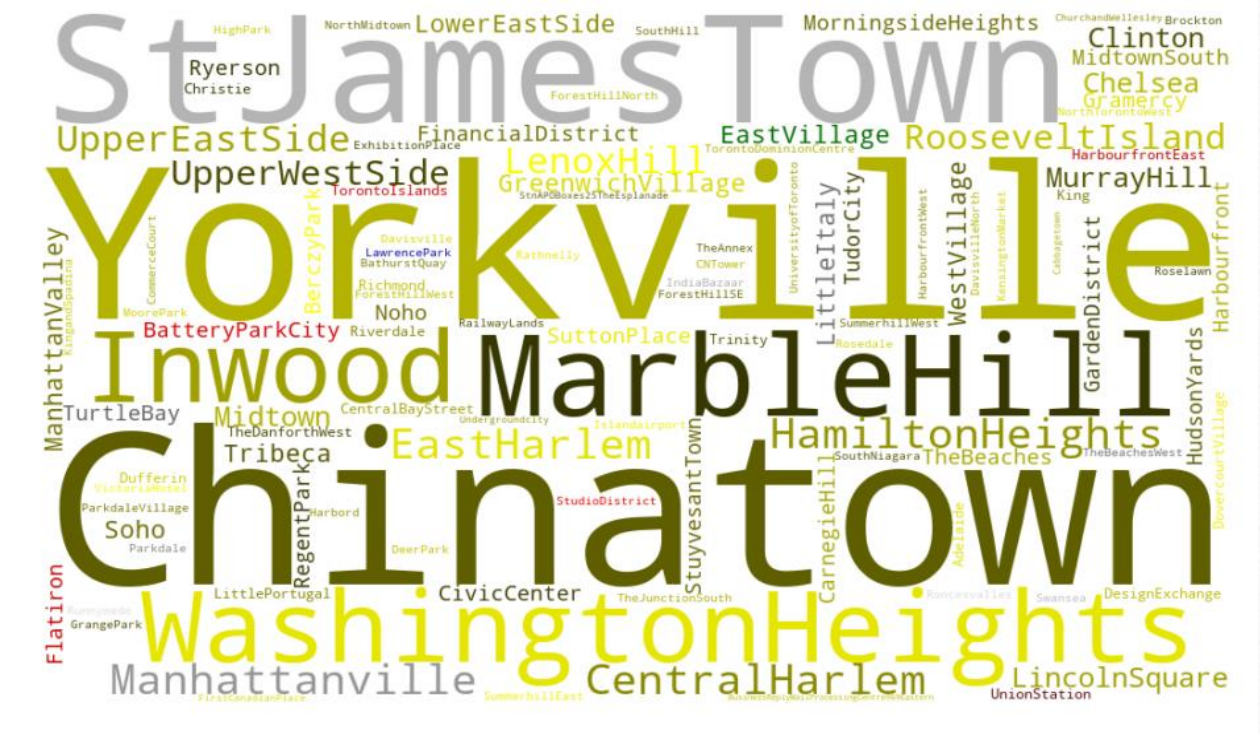
Excluding Gardens



Proportion of Data Section



Neighborhood Segmented Colors



Conclusion

- **Cluster 1:** Neighbourhood has Cafe, Italian Restaurants, Sandwich Place, Coffee Shops.
- **Cluster 2:** Neighbourhood has Parks, Playgrounds and Trails.
- **Cluster 3:** Neighbourhood has Food and Drink Shop, Parks and Sandwich Shop.
- **Cluster 4:** Neighbourhood has Bar, Café, Italian Restaurant, Park, Trail, Coffee Shop, Music Venue, Playground
- **Cluster 5:** Neighbourhood has Music Venues, Home Services and Gardens