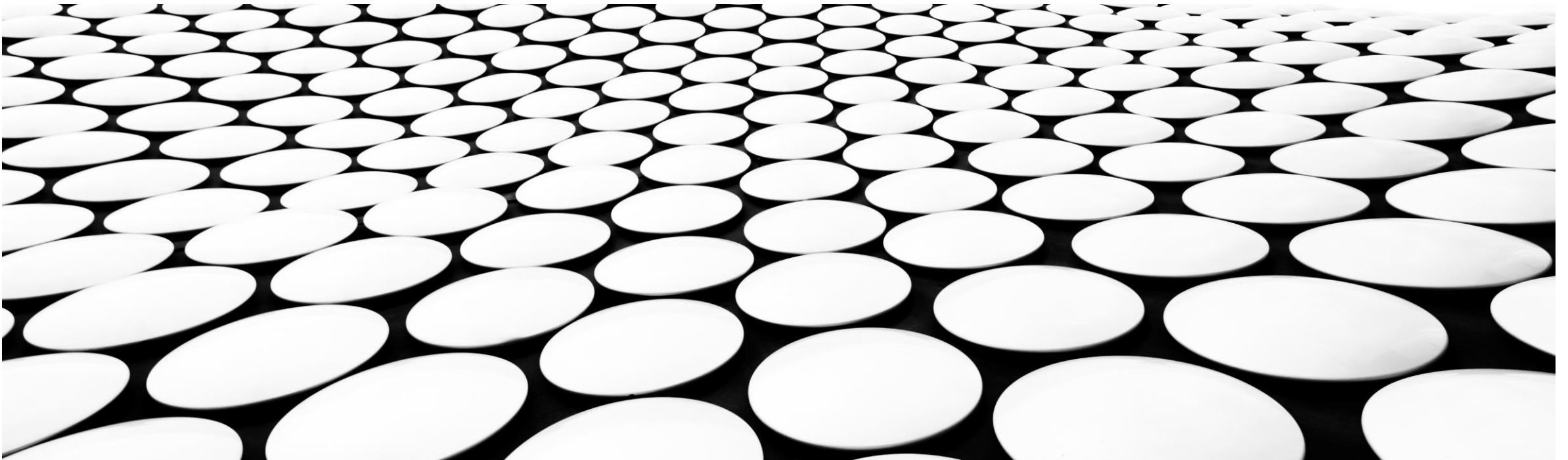


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# **PREDICTING BEST NEIGHBORHOOD IN TORONTO, CANADA TO OPEN A NEW GREEK RESTAURANT**

ODYSSEAS KYPARISSIS – DECEMBER 2020



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## PREDICTING THE RIGHT PLACE TO ESTABLISH A NEW BUSINESS IS CRUSIAL

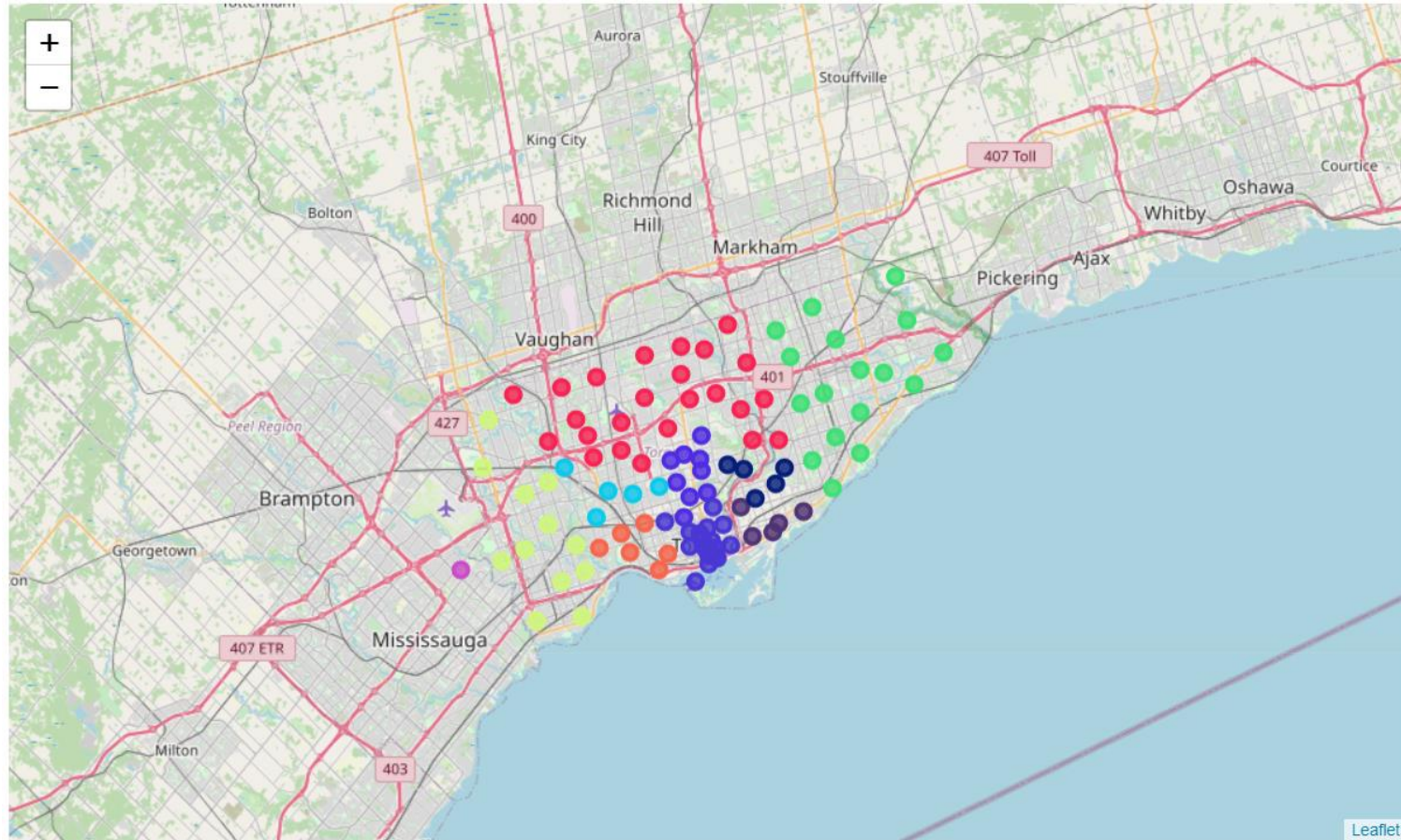
- The **establishment of a business** is totally correlated with numerous of factors.
- The main of these factors is the **right place**.
- The **right place** for a new business could bring both **competitive** and **economic advantages** to businesses.

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## DATA ACQUISITION AND CLEANSING

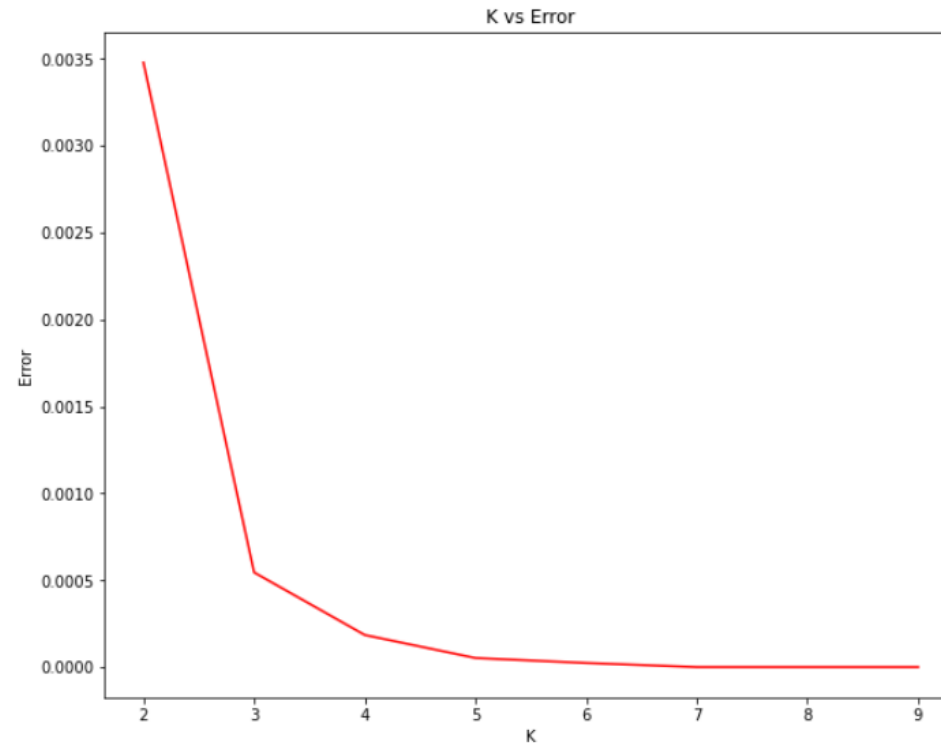
- **Names and Postal Codes** of all the boroughs and neighborhoods in Toronto Canada was pulled from **Wikipedia** website and especially [https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M)
- **Geographical data**, such as Latitude and Longitude of all those places was pulled from: [https://cocl.us/Geospatial\\_data](https://cocl.us/Geospatial_data) .
- **Venue data** for all of these places in Toronto, Canada was pulled from **Foursquare API** with a developer account.

# MAP OF TORONTO NEIGHBORHOODS COLORED BASED ON BOROUGHs THEY BELONG TO



# USING K- MEANS IN ORDER TO CLUSTER THOSE NEIGHBORHOODS

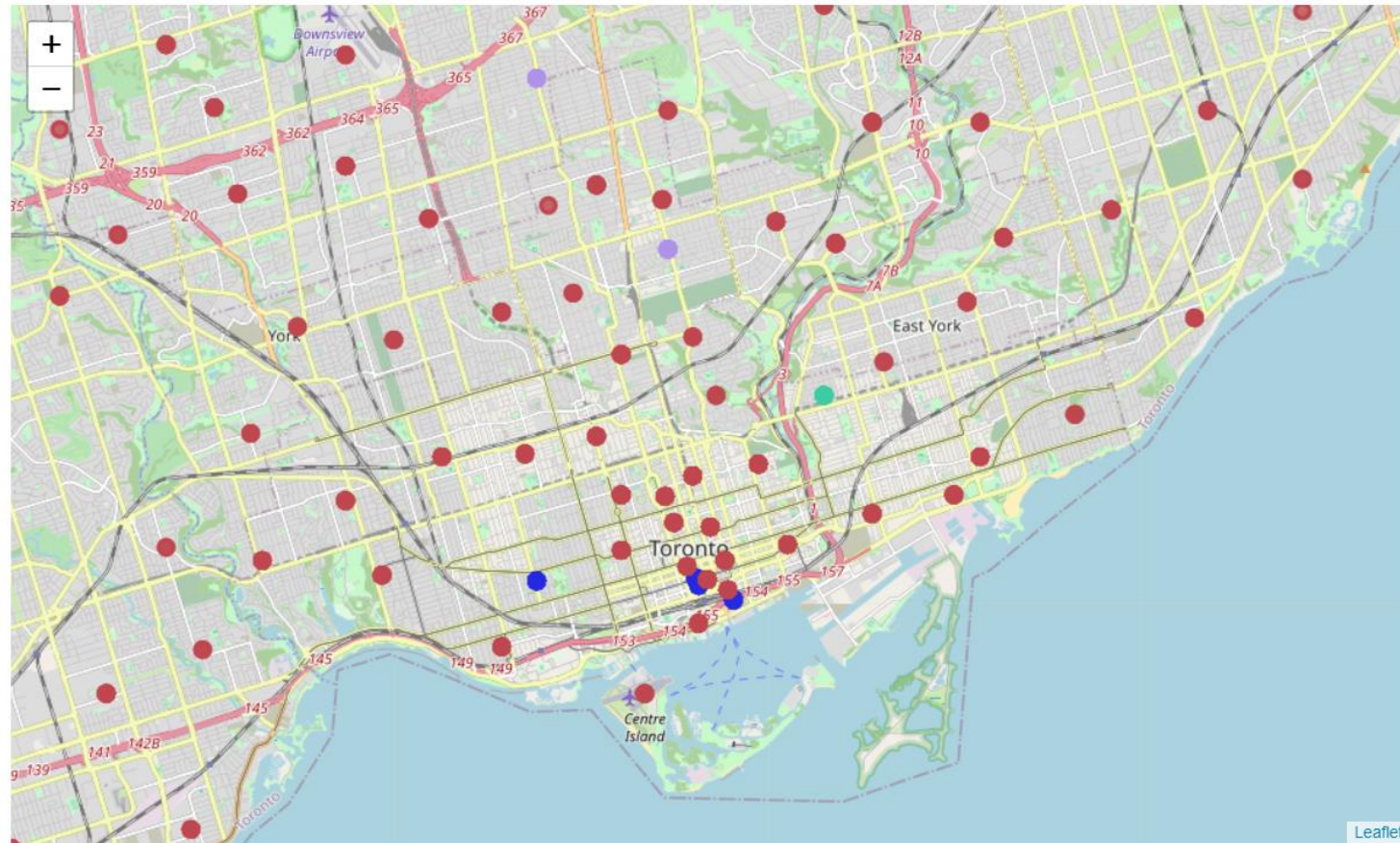
- In order to pick the optimum k – value for k – means algorithm we used the Elbow Diagram Technique.





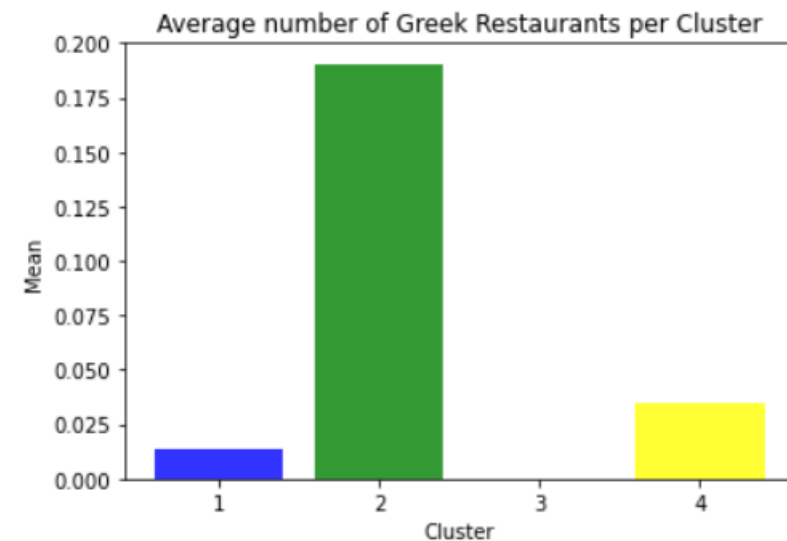
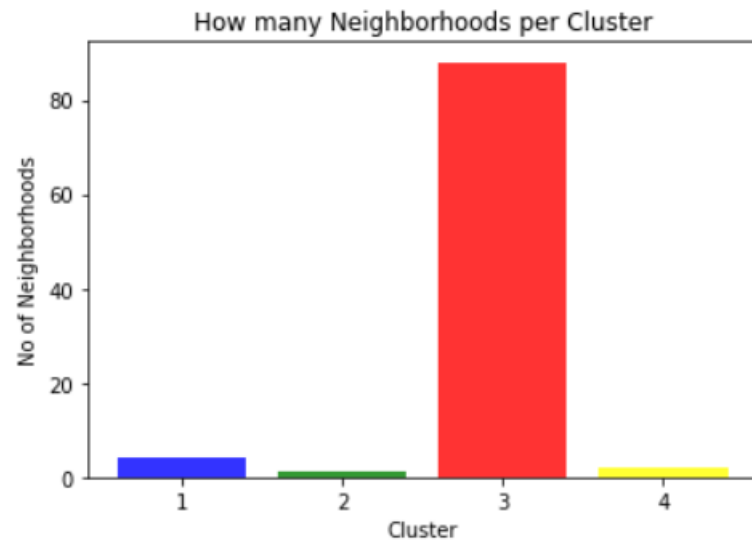
# CLUSTERING RESULTS BASED ON GREEK RESTAURANT DENSITY IN EACH NEIGHBORHOOD

- Blue is Cluster 1, Green is Cluster 2, Red is Cluster 3 and Purple is Cluster 4.



# RESULTS

- Bar Plots showing the number of Neighborhoods and the mean frequency of Greek Restaurants per Cluster.



## CONCLUSION AND VALIDATION THREATS

- Most of the Greek Restaurants are in cluster 2 represented by the green color on map depicted in Slide 6. Cluster 2 is mainly spotted in East Toronto Borough. The Danforth West and Riverdale was the only two neighborhoods that were located in this cluster. Even though there is a huge number of neighborhoods in cluster 3, there is not a single Greek Restaurant there. We see that in the Downtown Toronto and West Toronto area (cluster 1) there is the second lowest value of Greek Restaurants. Looking at the nearby venues, the optimum place to put a new Greek Restaurant is **Downtown Toronto** as there are many neighborhoods in the area but not a single one Greek Restaurant there, **eliminating any competition**. The second- best group of neighborhoods that would be a great opportunity to open a new Greek Restaurant consist of The Annex, North Midtown, Yorkville, North Toronto West, Lawrence Park located mainly in Central Toronto Borough in Cluster 3. Some of the drawback of this analysis are that the clustering is completely based on data obtained from Foursquare API. A better analysis would have been accomplished if we could use more info about the number of Greek Population in those areas.