



# Starting Restaurant Business in Toronto

CAPSTONE PROJECT

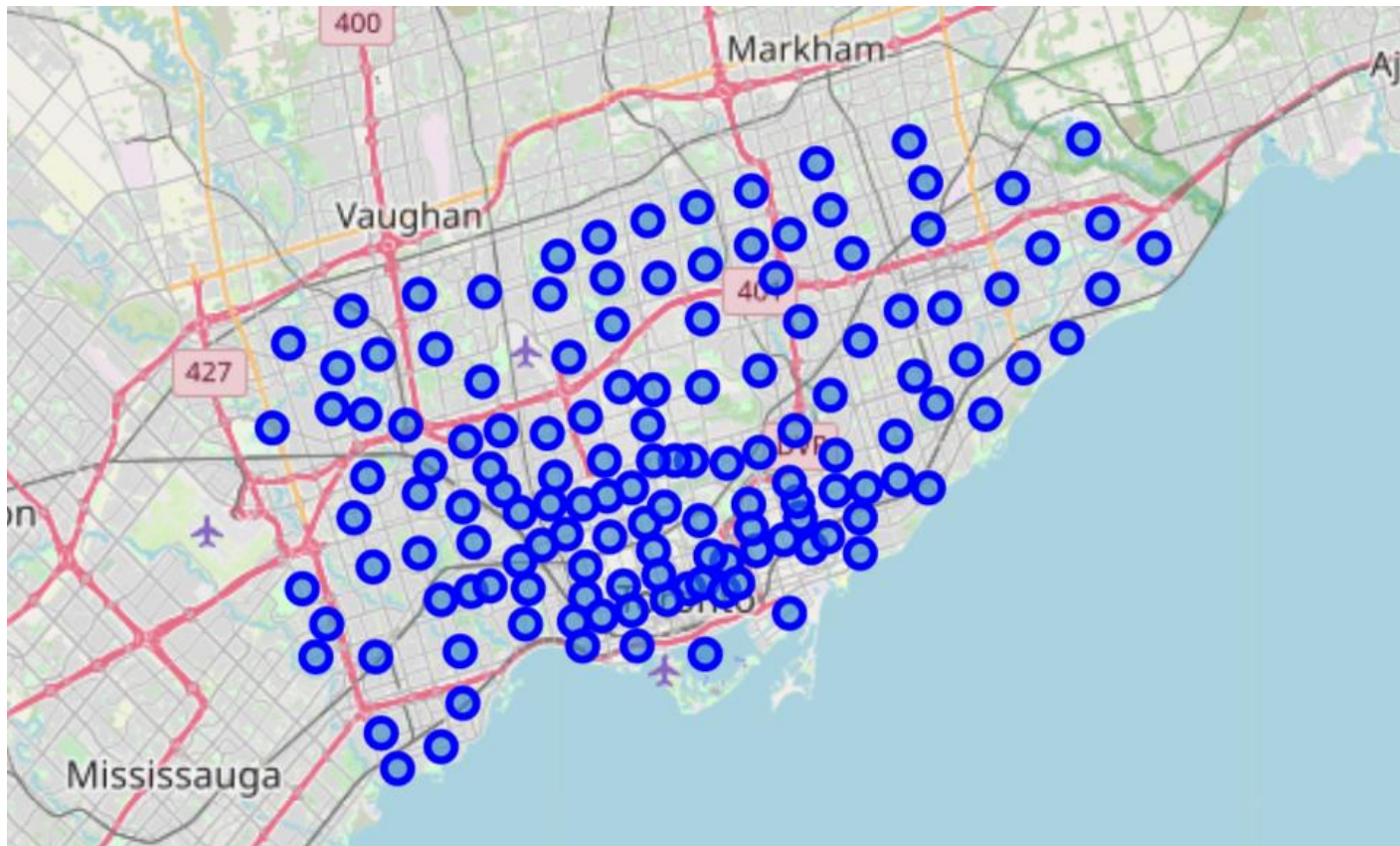
# To start your Investigation

- ▶ Due to the rapid development in Toronto, a high investment demand is investigated in Toronto.
- ▶ A large market in food and restaurant business in Toronto is brought by its tourism year by year.
- ▶ Then this research is to answer two key questions from the potential investors:
  - ▶ *“Where are the best choices of neighbourhoods to start a restaurant business in Toronto city?”*
  - ▶ *“Which type of restaurants should be recommended to be opened in different neighbourhoods in Toronto city?”*

# Data Acquisition

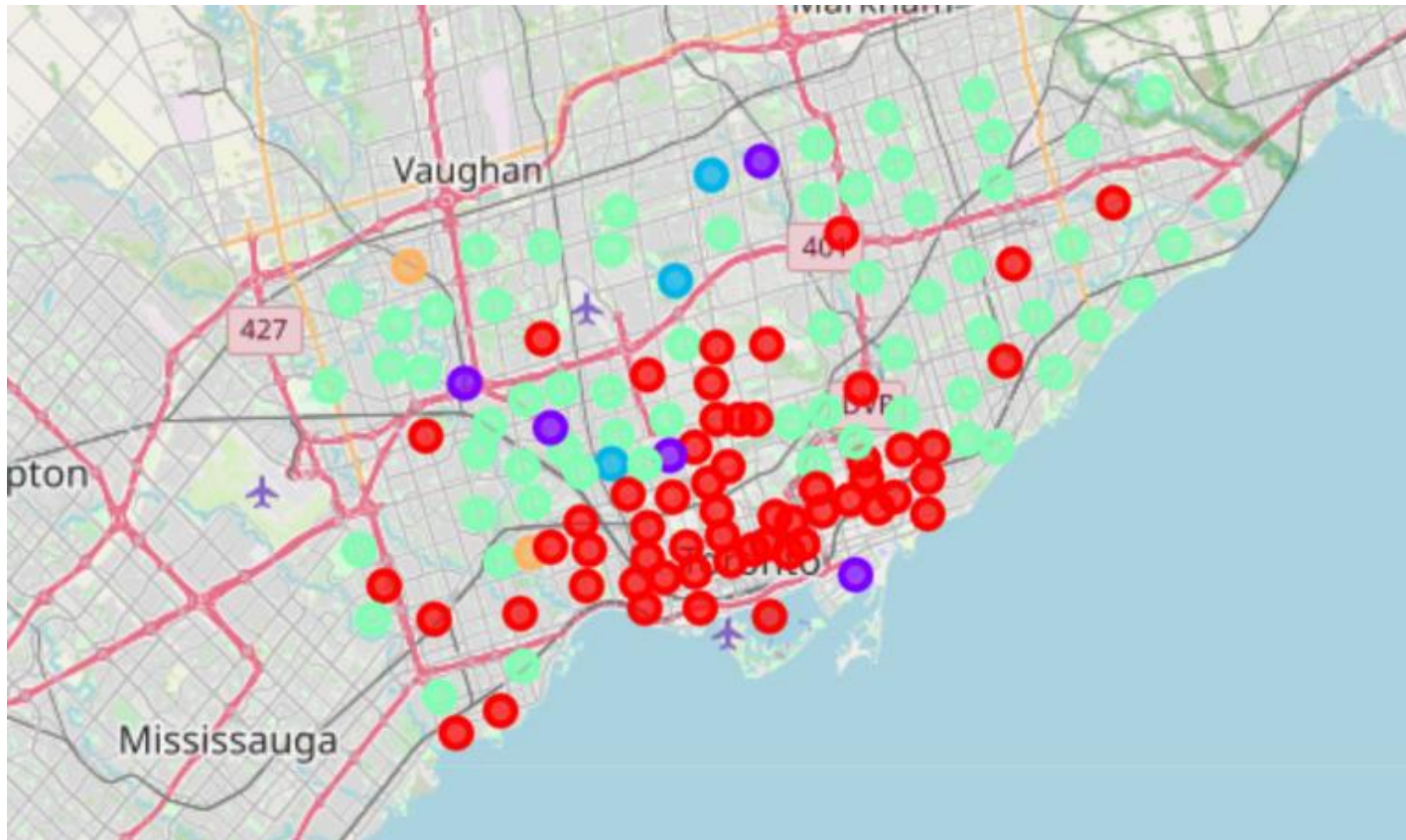
- ▶ Populations, Income, Immigrations: City of Toronto's Open Data Portal, available at <https://open.toronto.ca/>
- ▶ Neighbourhood location: Foursquare, <https://foursquare.com/>
- ▶ 141 neighbourhoods' information is introduced in the row dataset
- ▶ 131 neighbourhoods are investigated in the research due to the missing information in different datasets

# Neighbourhood Map in Toronto



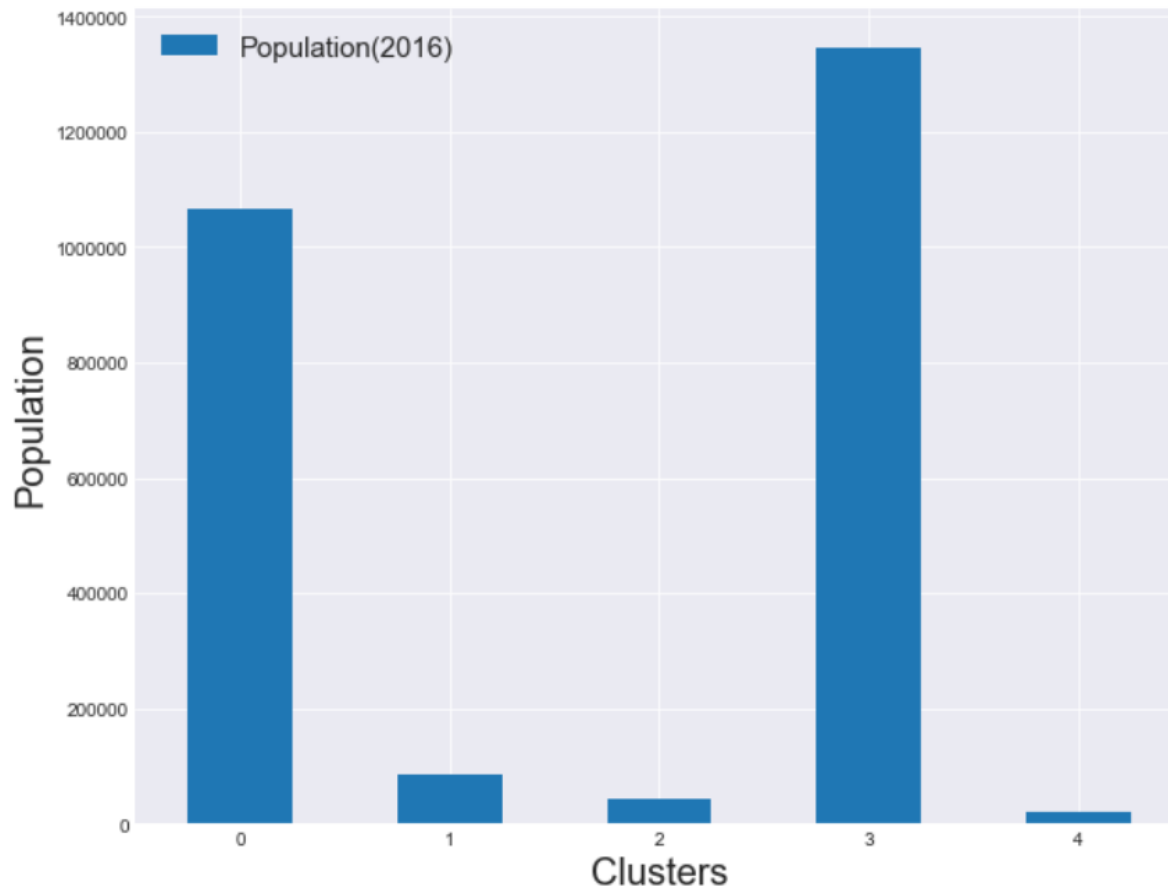
**131** neighbourhoods are found in the map.

# Clustered Neighbourhood Map



**5** clusters are generated by using K-Means clustering algorithm, with the features of **age group, income level** and **top 5 popular restaurants** in each neighbourhoods.

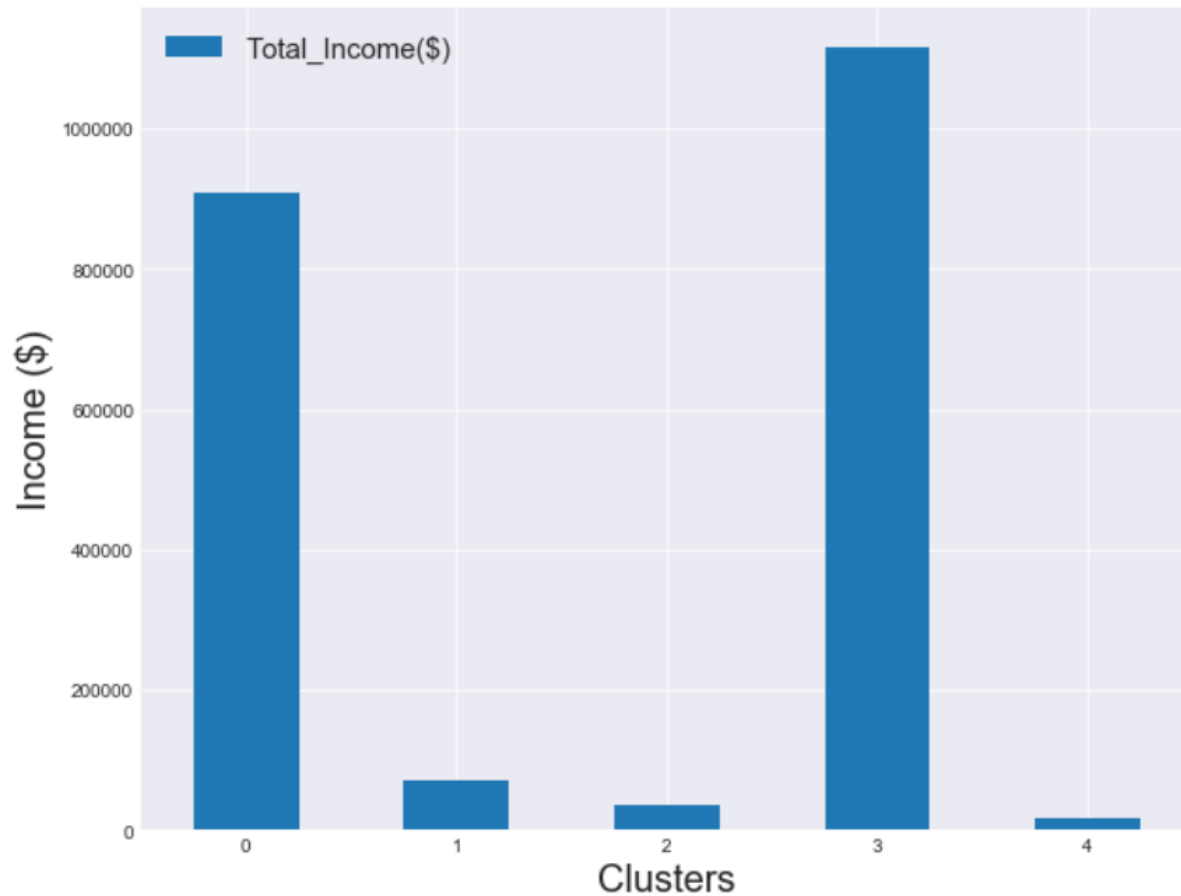
# Population Distribution



Population distribution in different clusters.

Cluster 3 contains the highest population, followed by cluster 0.

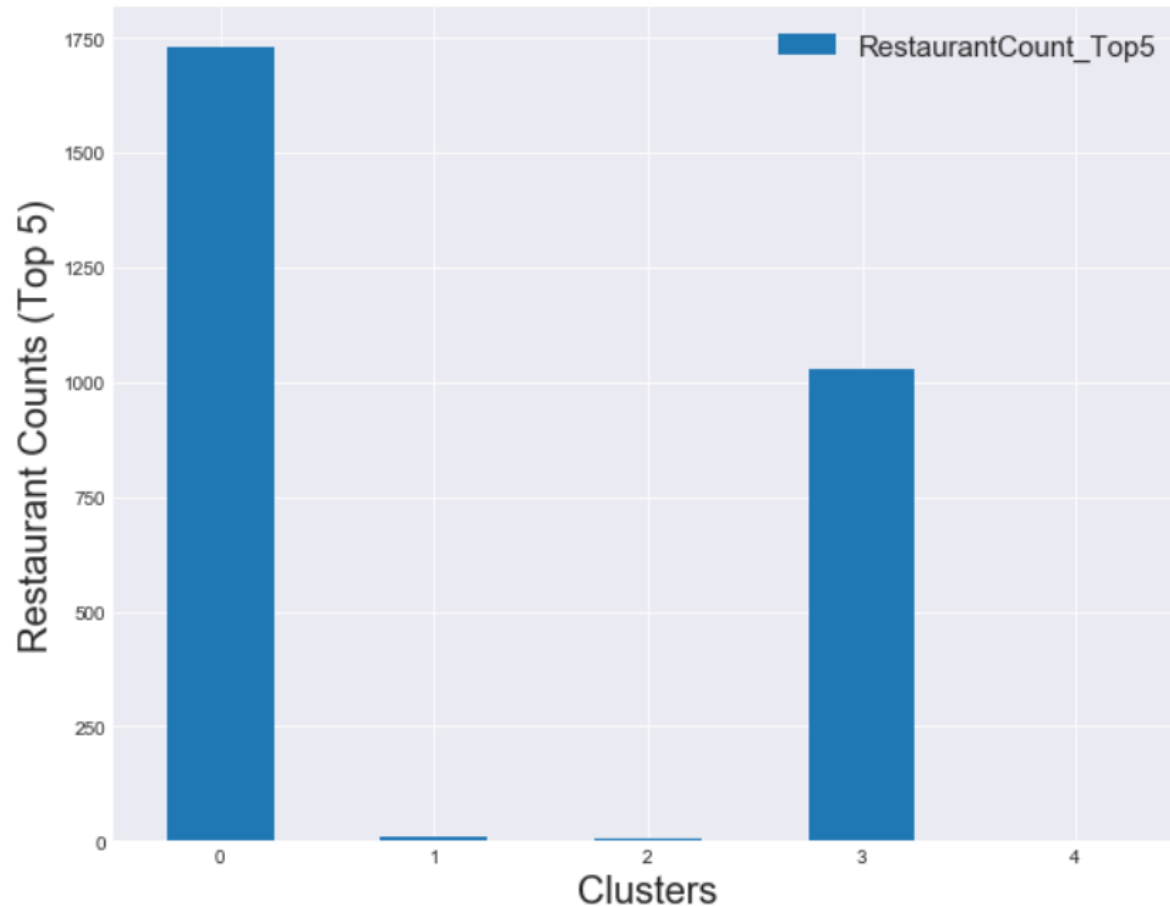
# Income Level



Total income in each cluster.

The income reflects the purchasing power of each cluster.

# Restaurant Distribution (Top 5)



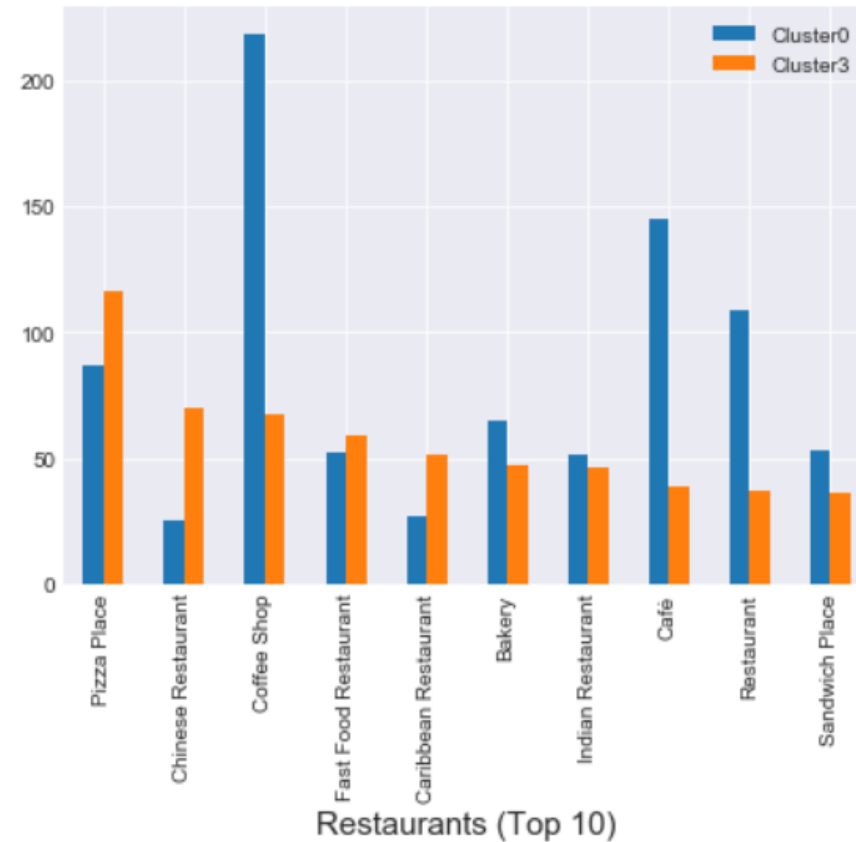
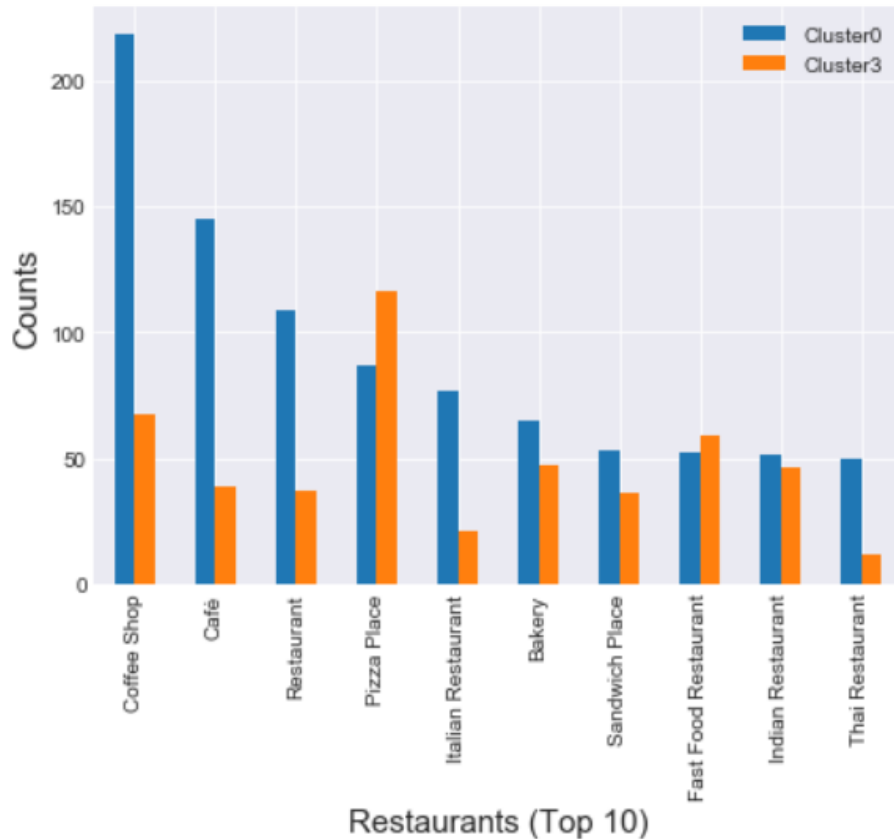
The top 5 popular restaurant distribution in each cluster.

The majority distribution of the top 5 popular restaurants are in cluster 0 and 3.

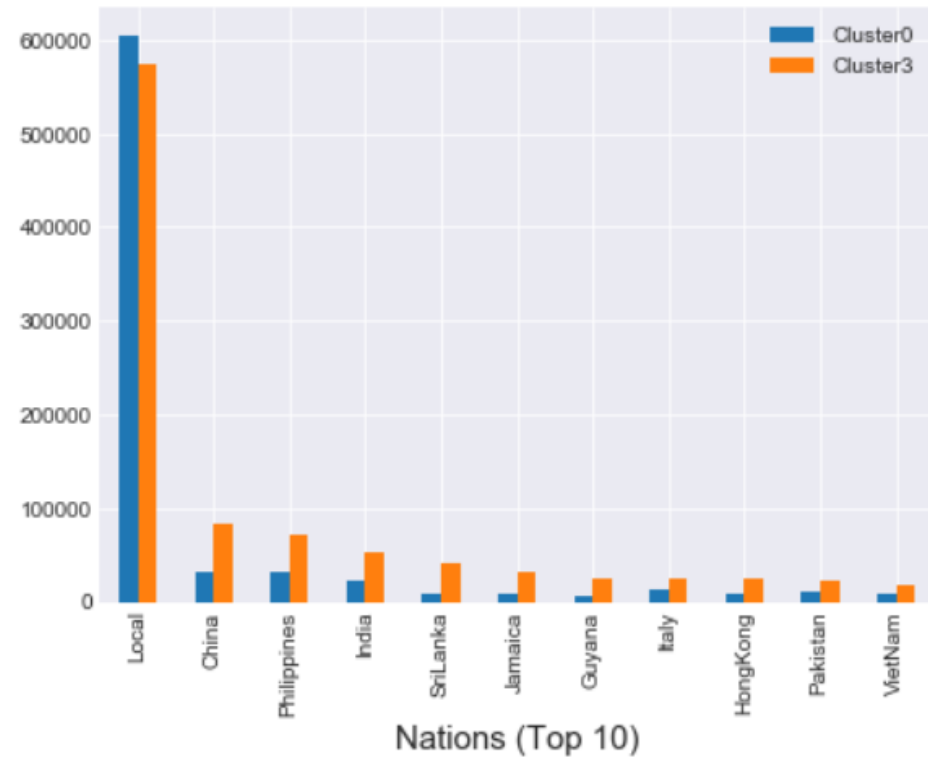
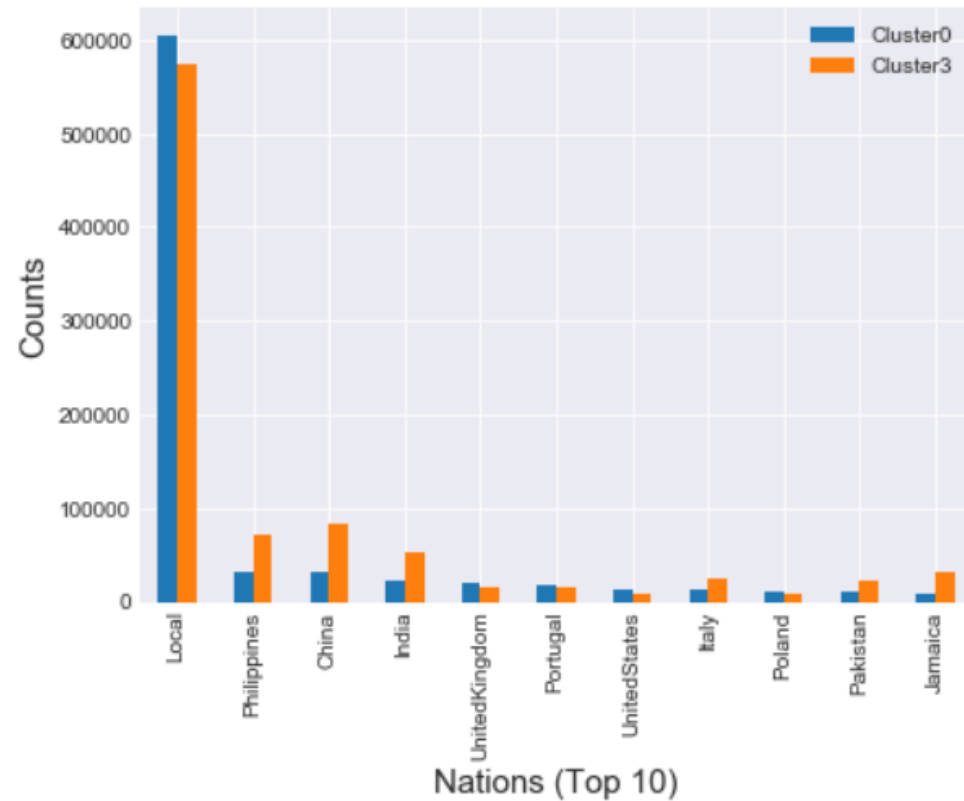
The number of top 5 popular restaurant in cluster 0 is about 1.5 times higher than that in cluster 3.



# Restaurant Comparison in Cluster 0 and 3



# Nations Comparison in Cluster 0 and 3



# Conclusion

- ▶ The number of potential customers and purchasing power in cluster 0 are higher than that in cluster 3.
- ▶ The number of restaurants in cluster 0 is less than that in class 3.
- ▶ The debit habit is determined by the local people and it is different in cluster 0 to cluster 3.
- ▶ The optimal neighbourhoods to start a restaurant business are the neighbourhoods in cluster 3 and the optimal choice is Philippine restaurant.
- ▶ The second optimal choice are the neighbourhoods in cluster 0 with the recommended choices of Chinese restaurant, or Philippine restaurant.