Neighborhood Analysis – Setting up a Food Delivery Business in Canada

By: Jade Lam

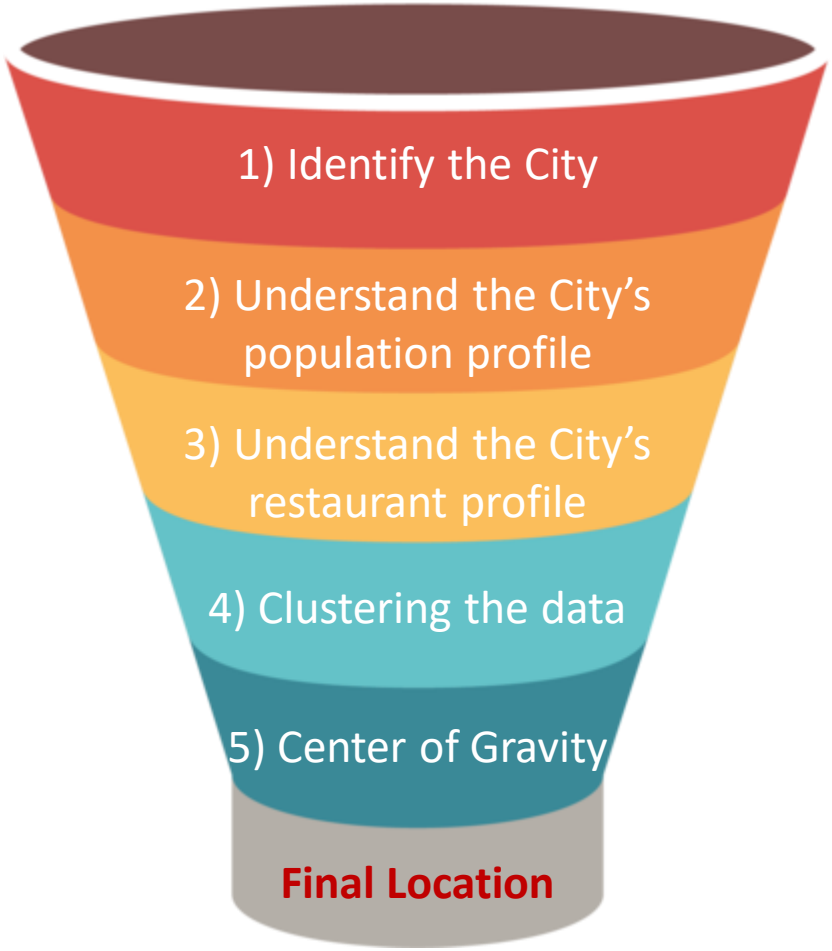
Problem Statement

1. The Problem
   - Identify a city in Canada with the best potential to setup a food delivery business

2. Target Audience
   - potential entrepreneurs, restaurant/ online platform owners seeking to understand customer base relative to their location

3. Outcome
   - Proposing a specific location, which has the highest potential to be the first business setup location

Methodology & Data Used



- Canada's population data – identify the biggest urban cities in Canada,
- Canada's commercial restaurant establishment data (by city) – short list a city to setup the delivery business
- Canada's provincial census data – to understand the population and income profiles
- Foursquare API data – for retrieving restaurant locations, identify setup point(s)
- Statistical methods (K-means clustering) – cluster similar neighborhoods
- Center of gravity – identify centroid where service point should be setup

Observations/ Recommendations

	CSD — City/Municipality/Town	Population	Restaurants
1	Toronto, Ont.	2731579	7500
2	Montreal, Que.	1704694	7182
3	Calgary, Alta.	1239220	3360

- Among the top cities, Toronto has the highest amount of population as well as the number of restaurants
- Given revenue potential is directly correlated to orders & customers, it is recommended Toronto to be chosen as the city for this business setup

Observations/ Recommendations

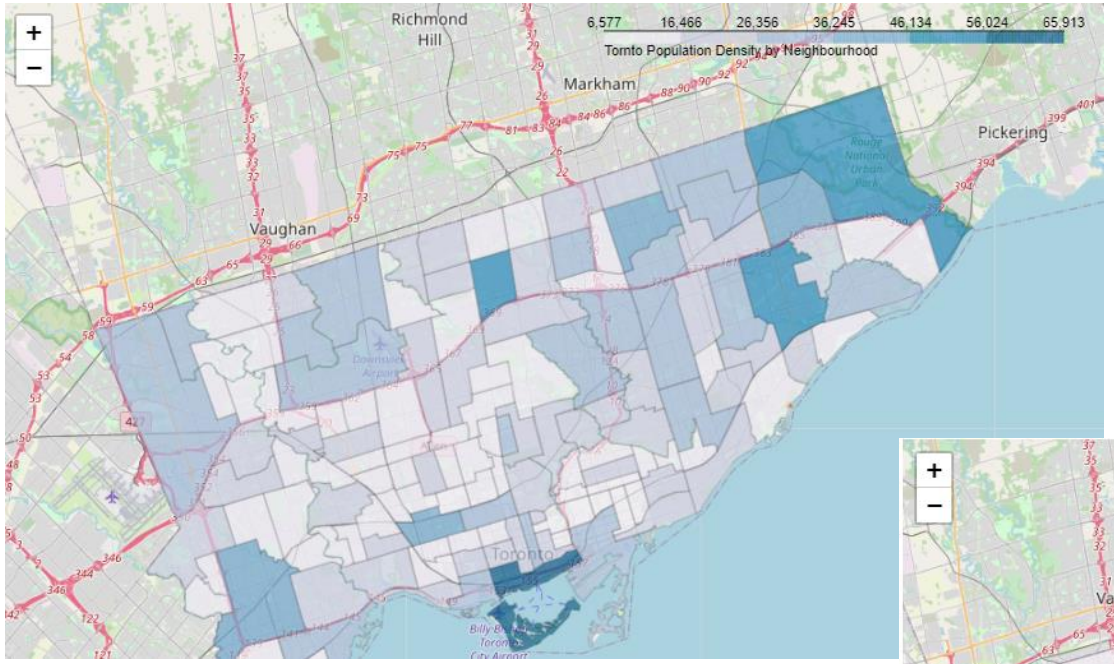


Fig1: population map

- In terms of population profile and income profile of Toronto, there seems to be a positive correlation
- Both maps look largely similar

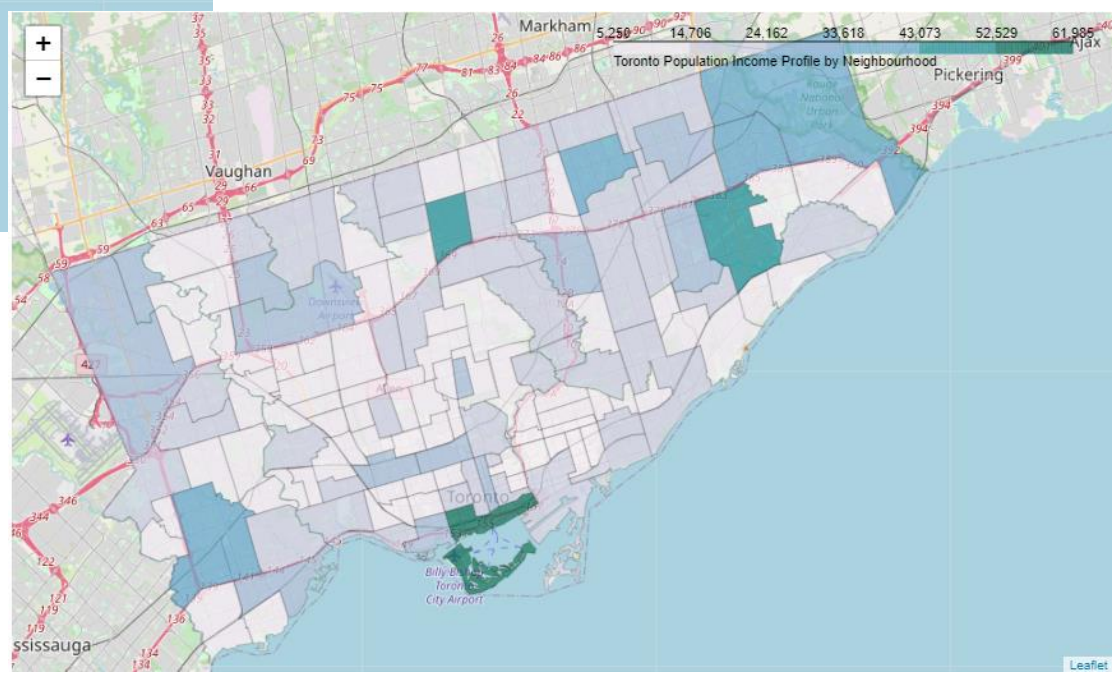


Fig2:
income map

Observations/ Recommendations

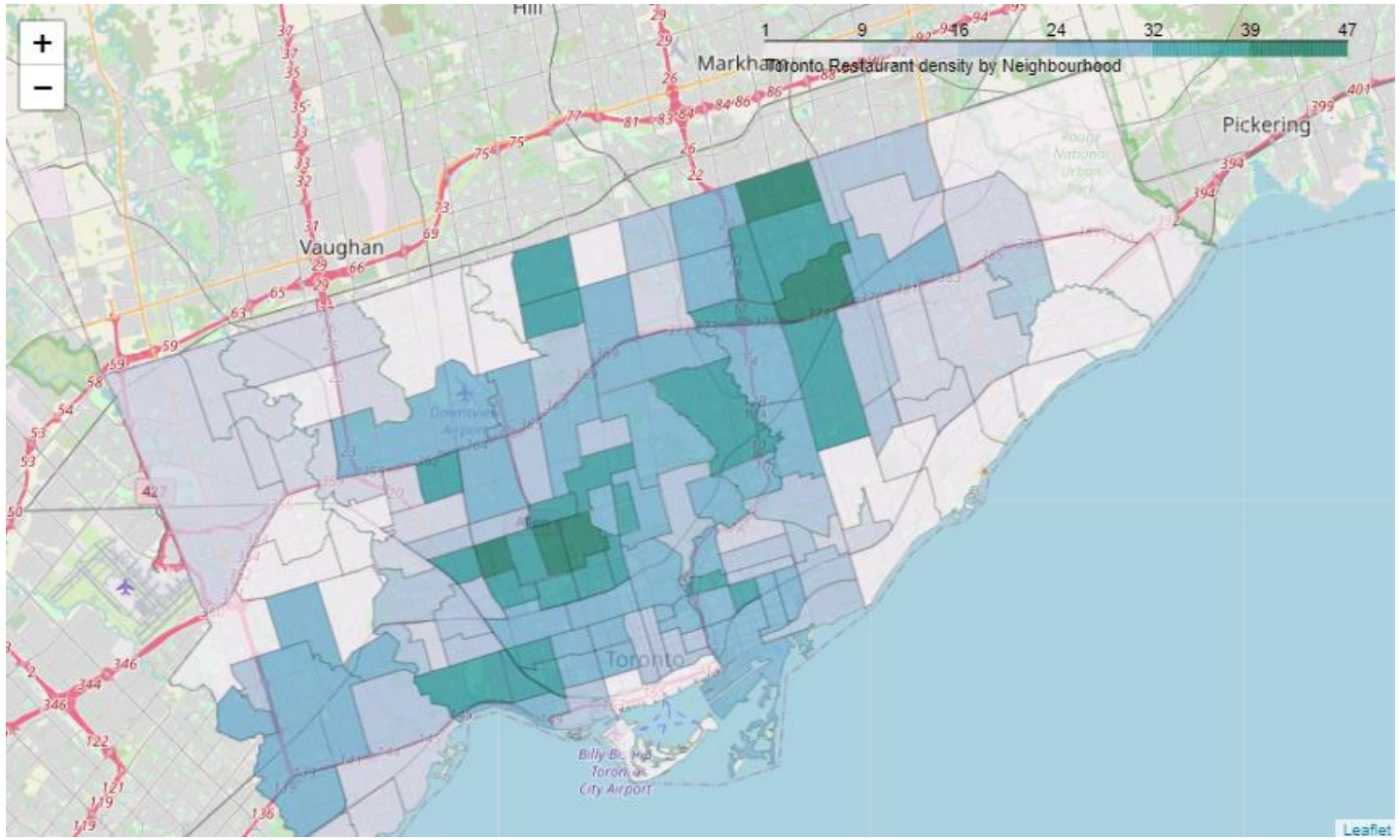
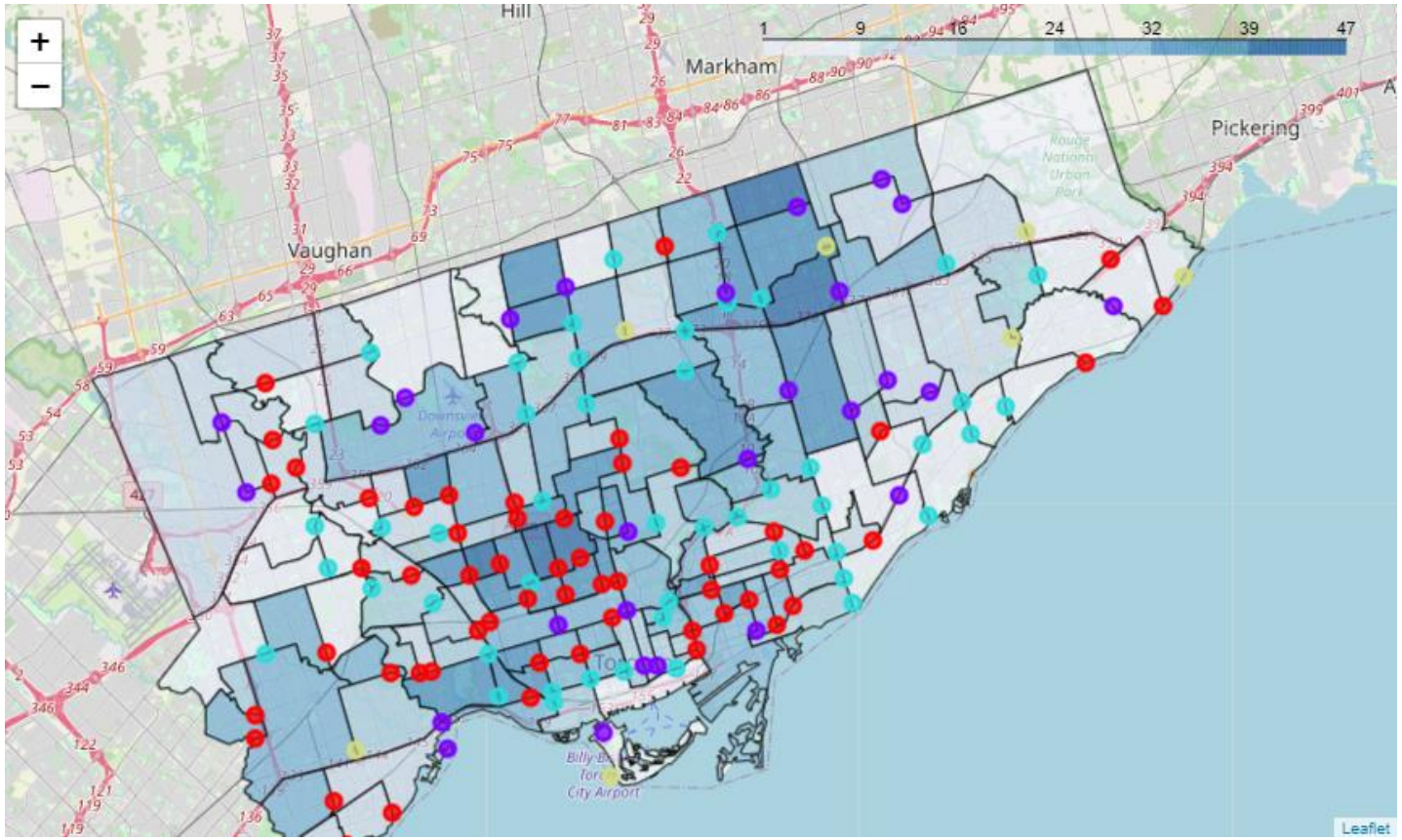


Fig3: restaurant map

- When it comes to commercial restaurant establishment, presence is gravitated away from most densely populated areas
- This means service setup location needs to consider also based on most densely populated restaurant locations

Observations/ Recommendations



- The map shows neighborhoods with similar restaurant and population profile
- Red cluster is most prevailing in the map
- Drilling into the data, these are neighborhoods with both high density in population and no of restaurants
- It is suggested the initial business setup will be catered towards serving this cluster

Fig4: clustering map

Conclusion

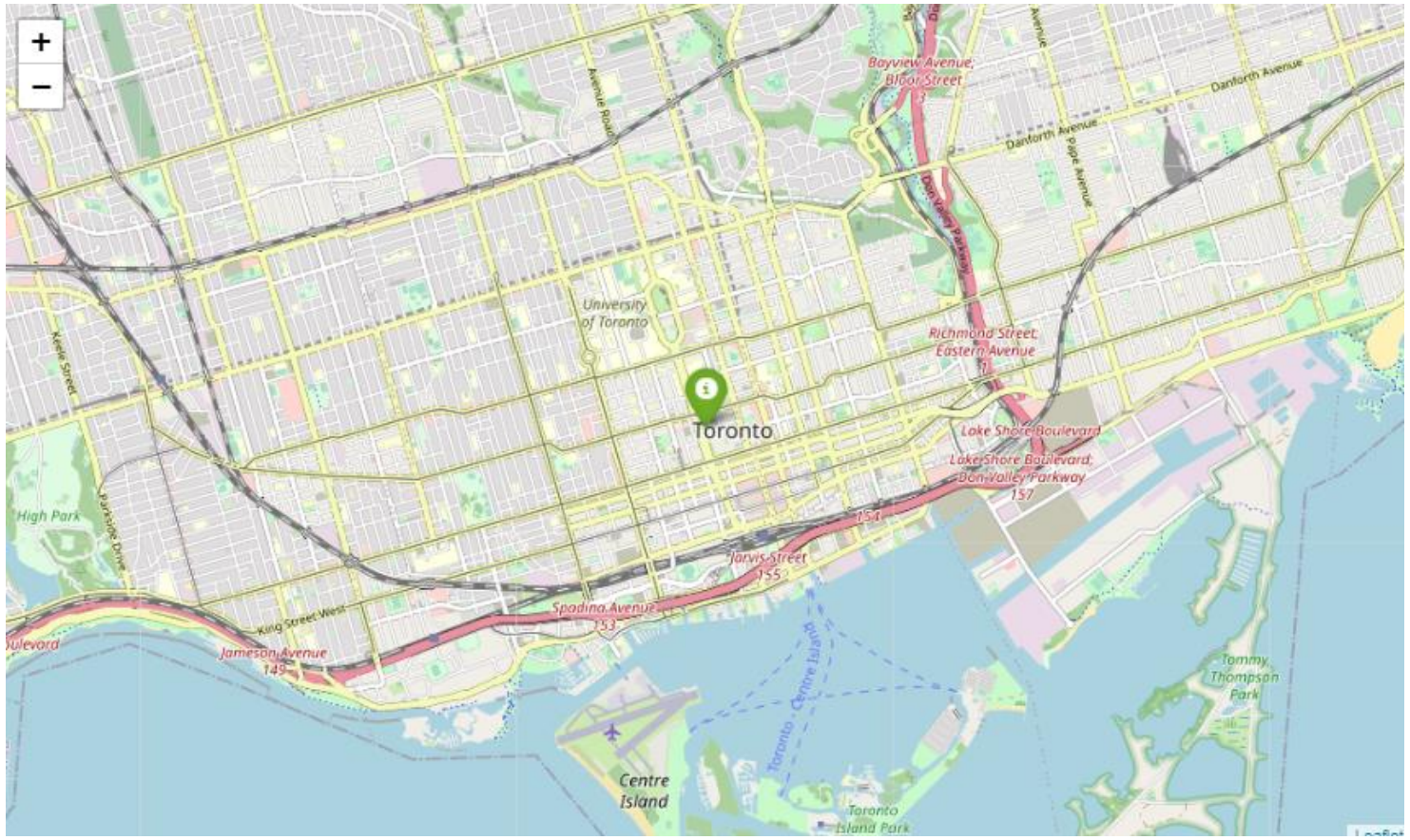


Fig5: center of gravity map

- Based on center of gravity method, which optimizes distance across all cluster points, the best point to setup a delivery business would be at the green marker
- As some of the FourSquare API data quality may not be comprehensive, it is suggested this model to be further fine tuned with operation data to evaluate further business expansion locations