What best place to start a new healthy food restaurant in Toronto?

Problem Statement

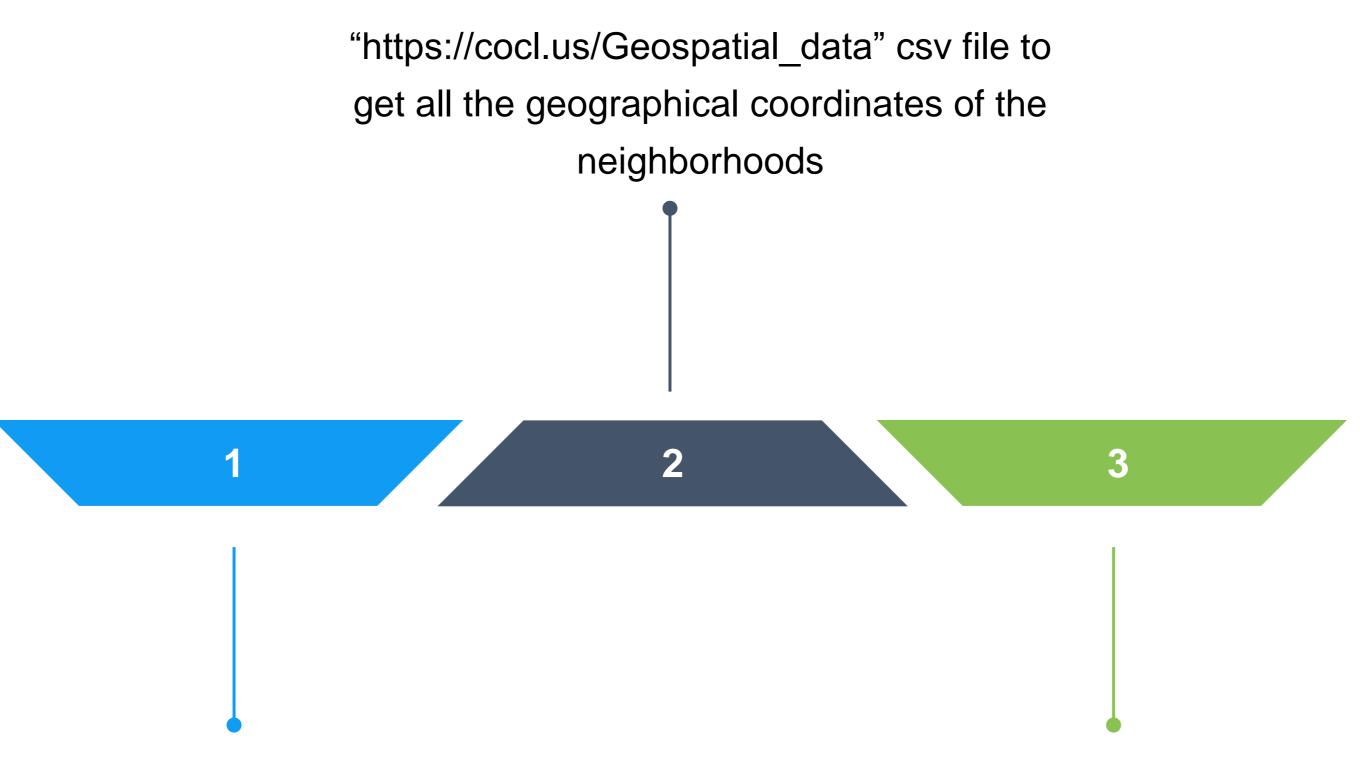
Toronto is one of the biggest cities in Canada, and it is the most populous Canadian city.

However, the percent of adults that had an overweight/obese status is always increasing until now! In fact, it is due to many reasons including the lack of restaurants which provide healthy food!

Target Audience:

- People suffering from obesity.
- people who follow special diets.
- Many business man, investors and
- People used to consummate healthy food as part of their culture (people from Sweden as example)

Data acquisition and cleaning



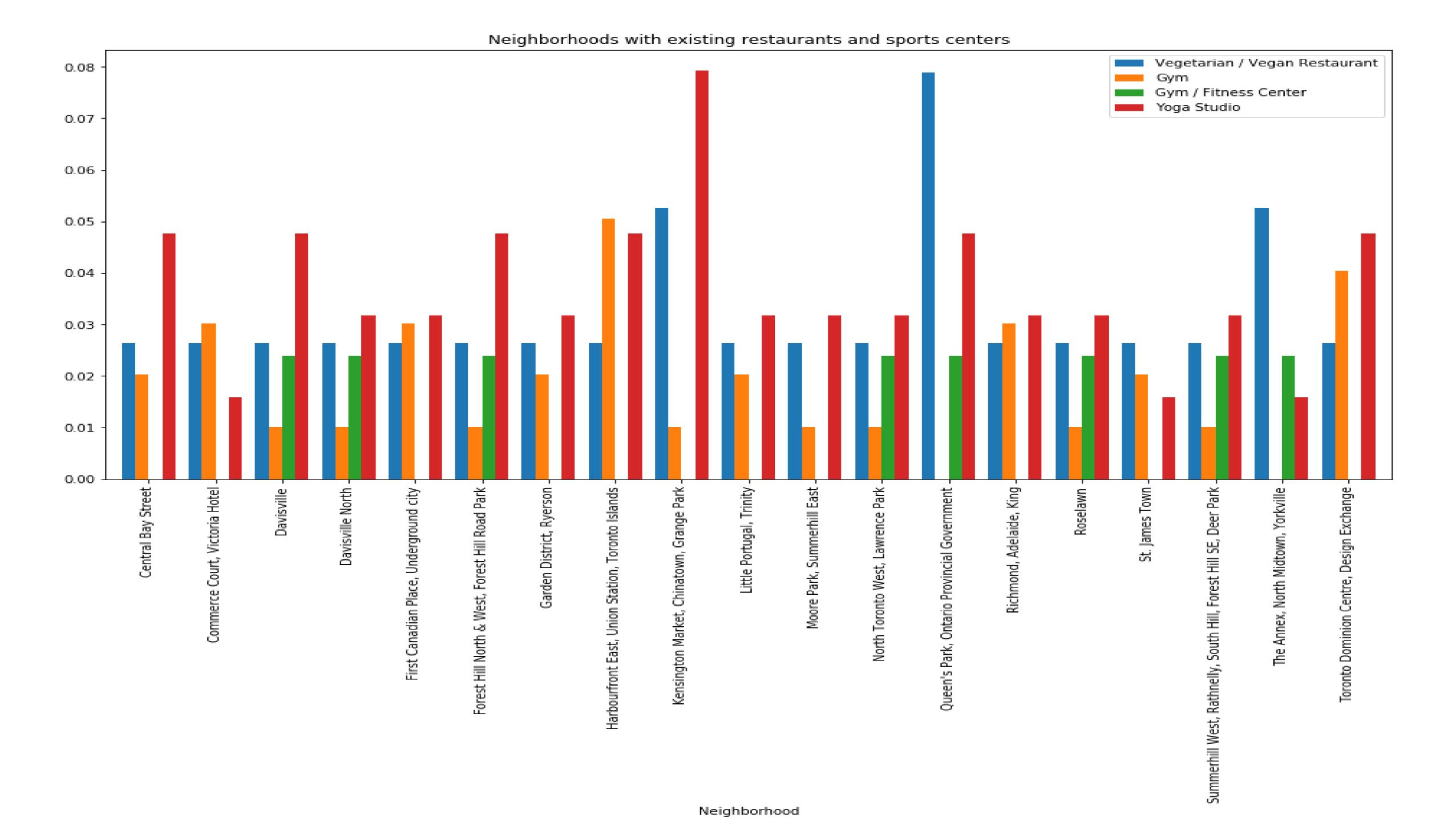
dataset of Toronto city which contains information about its Boroughs and Neighborhoods ((https://en.wikipedia.org/wiki/List_of_postal_codes

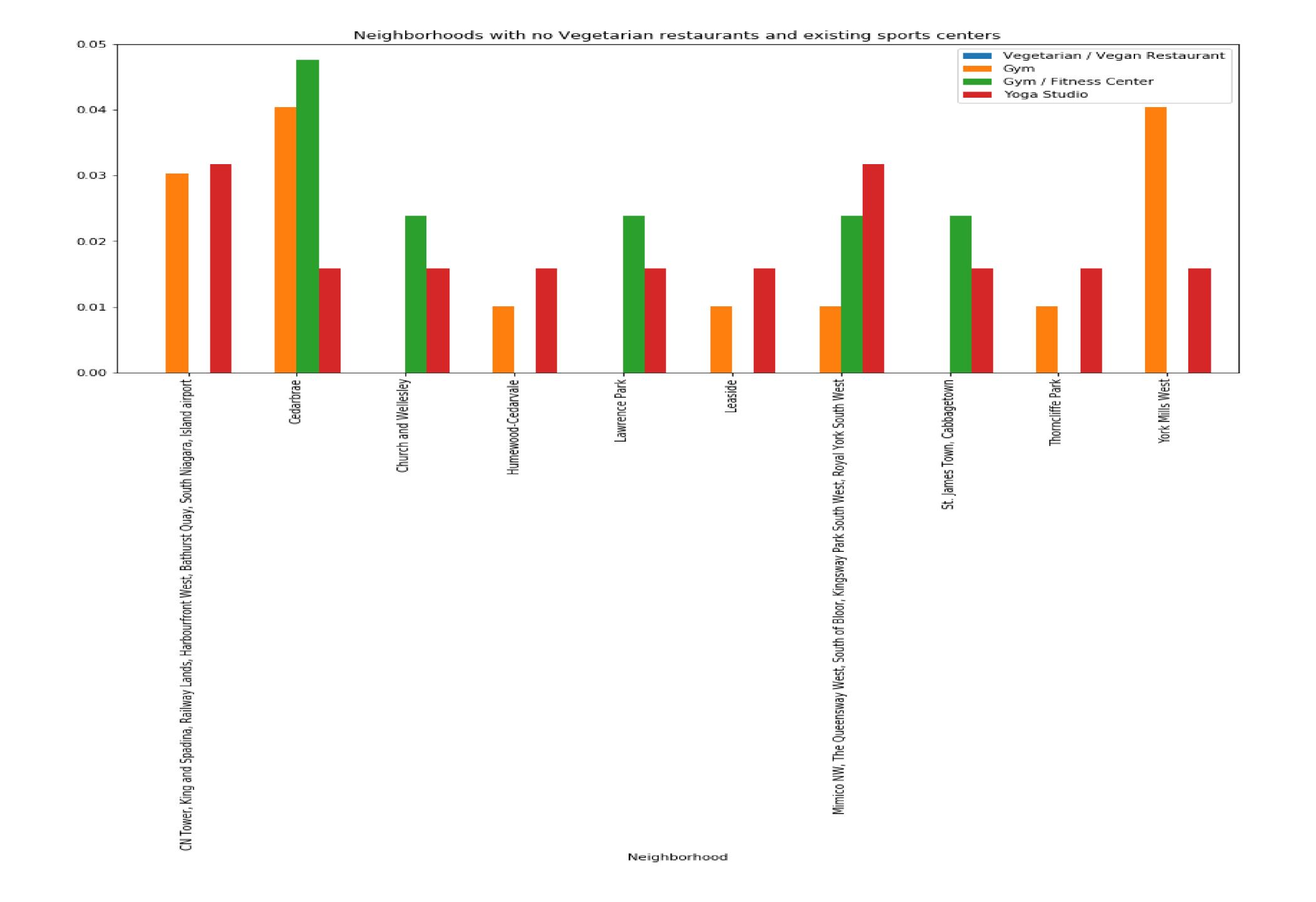
of_Canada:_M)

data from Foursquare API for each neighborhood within a radius of 500 m

Exploratory Data Analysis

- Extract the following venue categories : Vegetarian / Vegan Restaurant, Gym / Fitness Center, Gym, Yoga Studio, which appears more significant.
- Draw an interactive map
- Encoding
- Grouping data by neighborhoods





Clustering:

For segmenting neighborhood in Toronto based on existed vegan restaurants, gym, fitness and yoga, and finding recommendation for a good start of restaurant business, clustering algorithm will be used especially K-mean method.

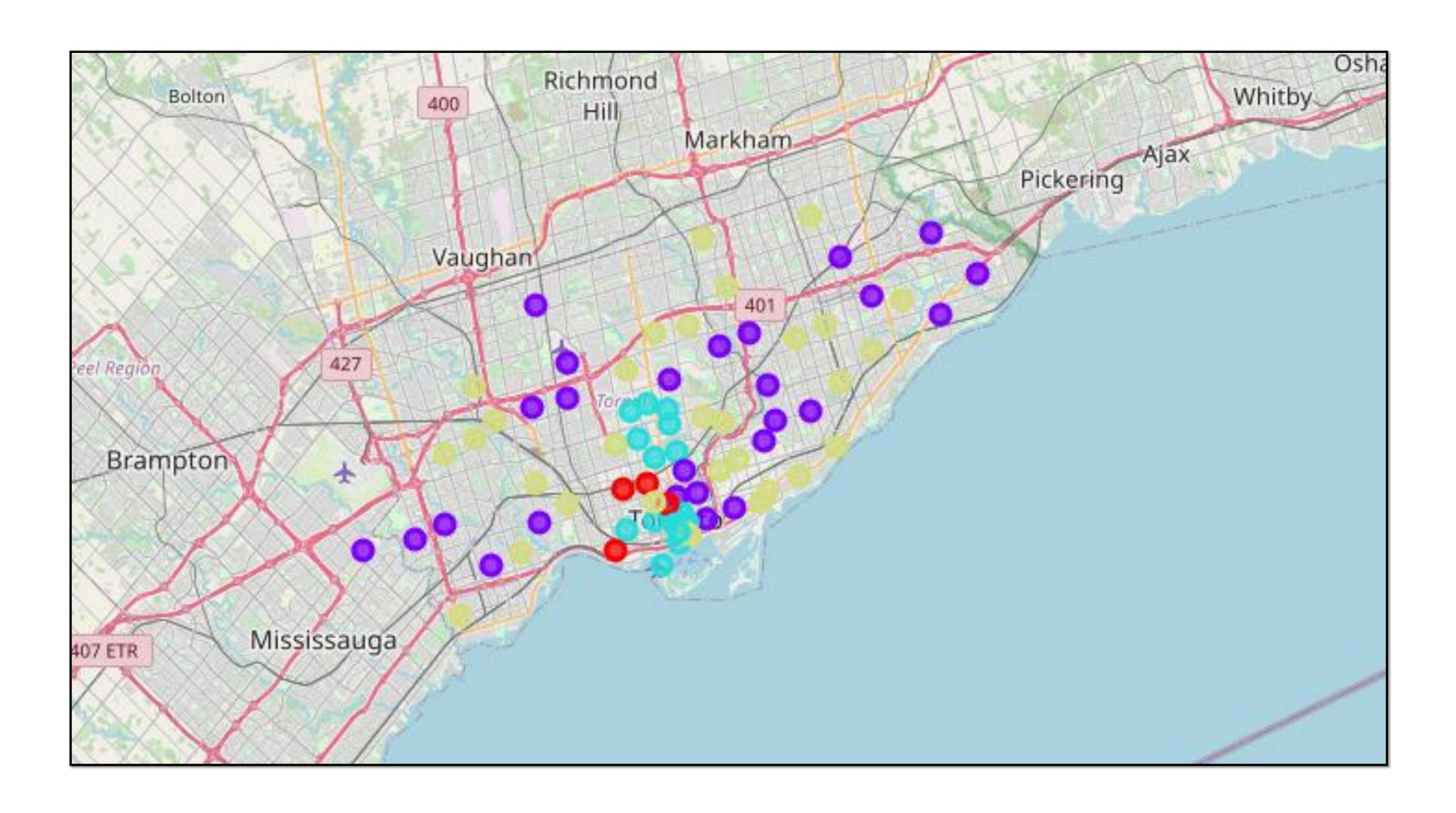
Final Clusters:

- neighborhoods with the higher number of Vegetarian / Vegan Restaurants (red)
- neighborhoods with high number of
 Gym/ Fitness Centers and fewer Vegetarian /
 Vegan Restaurants

 (purple)

- neighborhoods which are densely populated with Gym and yoga centers, the same as the number of Vegetarian / Vegan Restaurants (blue)
- neighborhoods with a good number of Gym and yoga centers, and has least number of Vegetarian / Vegan Restaurants.

 (yellow)



Conclusion:

Downsview, Cedarbrae and York Mills West could potentially be perfect places for starting quality healthy food restaurants.

