

# The Battle of the Neighborhoods - Week 2

## Introduction & Business Problem:

### Problem Background:

Toronto is the provincial capital of Ontario and the most populous city in Canada, with a population of 2,731,571 as of 2016. Toronto is an international centre of business, finance, arts, and culture, and is recognized as one of the most multicultural and cosmopolitan cities in the world. Given that it can be concluded that Toronto has many restaurants, what would be the best type of restaurant to open given the amount of restaurants in other categories?

### Problem Description:

Restaurant is a business which prepares and serves food and drink to customers in return for money, either paid before the meal, after meal, or with a open account. The City of Toronto have a lot of restaurant with diversity of categories. What is the best category of a restaurant to open in Toronto minimizing competition for more profit?

1 - Filter some neighborhoods and gives restaurants 2 - Get a amount of categories of restaurants 3 - Calculate the most possible categorie to open a restaurant

### Target Audience:

People who wants to open a restaurant in Toronto.

### Success Criteria:

The success criteria is to calculate the best category of a restaurant to open in Toronto, and return profit in the practice.

## 2. Data:

One city will be analysed in this project : **Toronto City** We will be using the below datasets for analysing Toronto city.

**Data 1:** [Toronto Postal codes](#)

This is a list of postal codes in Canada where the first letter is M. Postal codes beginning with M are located within the city of Toronto in the province of Ontario. Only the first three characters are listed, corresponding to the Forward Sortation Area.

Canada Post provides a free postal code look-up tool on its website, via its applications for such smartphones as the iPhone and BlackBerry, and sells hard-copy directories and CD-ROMs.

Many vendors also sell validation tools, which allow customers to properly match addresses and postal codes. Hard-copy directories can also be consulted in all post offices, and some libraries.

**Data 2:** [Postal Codes Long Lat](#) Here is a link to a csv file that has the geographical coordinates of each postal code:

#### Example of the Data:

	Postal Code	Borough	Neighborhood	Latitude	Longitude
0	M3A	North York	Parkwoods	43.753259	-79.329656
1	M4A	North York	Victoria Village	43.725882	-79.315572
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.718518	-79.464763
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494

## 3. Methodology

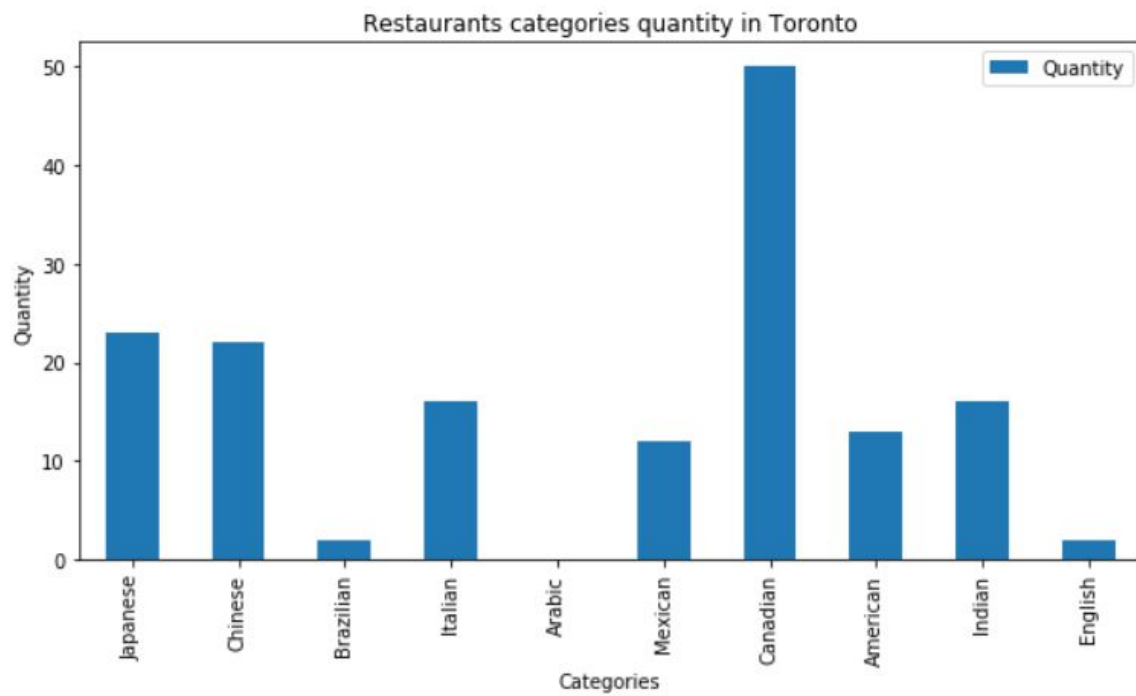
Our main goal is to get the quantity of restaurants categories to showing to people who wants to open a restaurant and can choose the better option.

#### Analytic Approach:

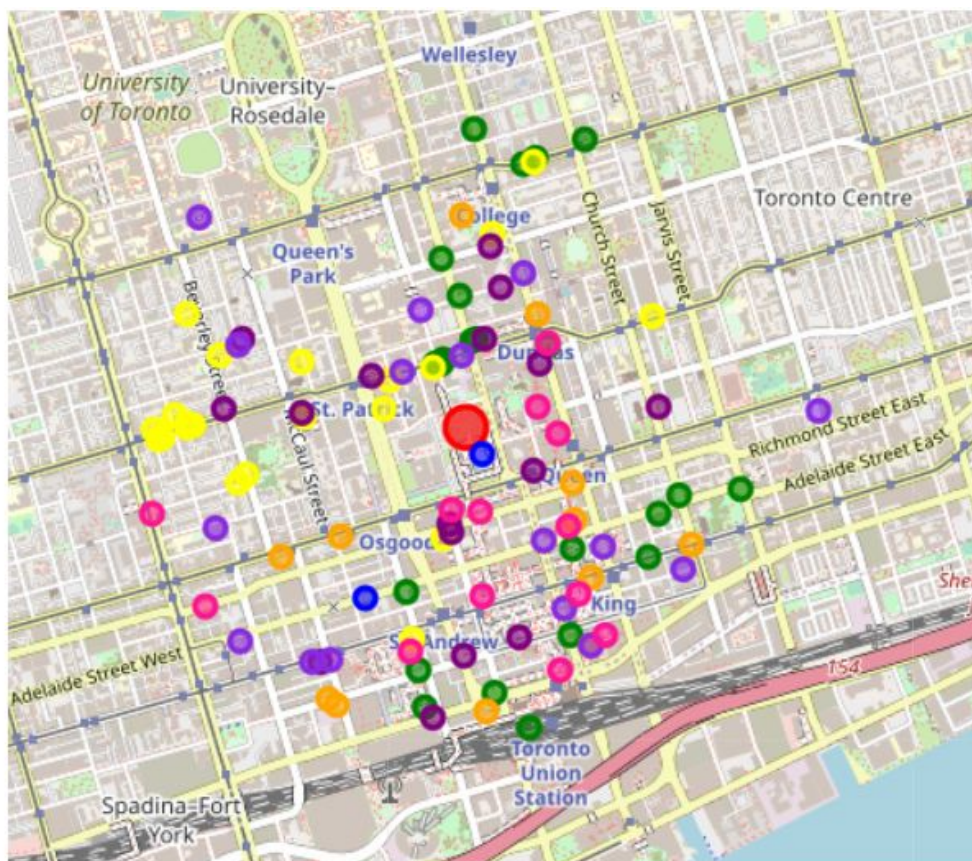
Toronto city has a lot of restaurants with a lot of categories. In this project first part is get the total of quantity per categories and plot in a statistical graph. Second is to plot all of this restaurant in a radius of 1000 in a Map to show to the people there respective locations.

#### Exploratory Data Analysis:

## Statistical graph



## Map of the restaurants per categories



## **4. Results**

From this venues data we filtered and used only restaurant in a radius of 1000 in the center of Toronto. In this project I used only used statistica skills and probability analysis. It's simple to see whats is the better category of restaurant to choose to open a new unity.

## **5. Discussion**

The scope of this project is minimized to a radius of 1000 to simplify the analyses, but can be simply redirection to other biggest radius.

## **6. Conclusion**

If you look to the graphs, the better categories to choose is Arabic, Brazilian and ENglish, because is the lower quantity of restaurants.