

# The Battle of Neighborhoods

## Introduction

Harry is thinking about opening a Pizza cuisine. He is currently considering 2 options between New York, where he can stay close to his old mom, and Toronto, his spouse's hometown. To make decision, he ask me to get some figure about the competitors in 2 areas. This analysis will help guide Harry on how many competitors will be around if he decides to run his own Pizza shop.

## Data Collection and Usage

In this assignment we will collect the venues around the cities from Foursquare service. Then we will find the cities where there is less number of cuisine business to derive the potential prospect.

## Methodology

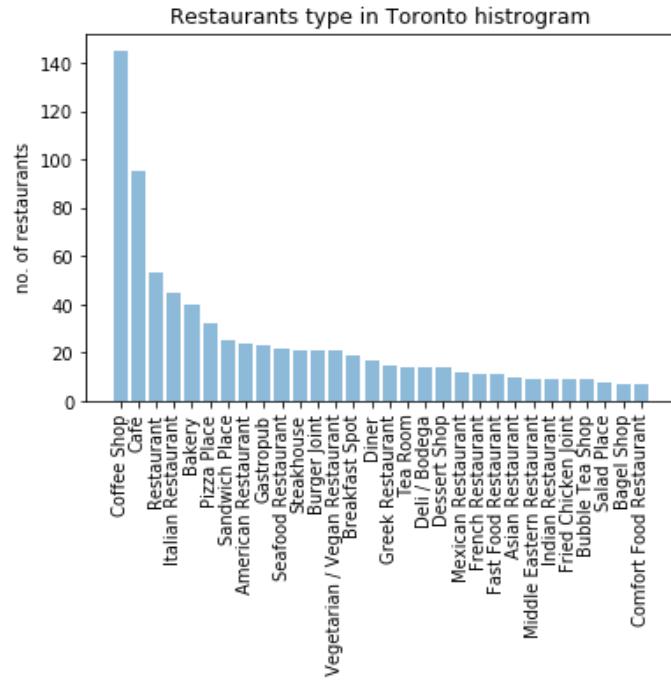
1. Get New York and Toronto cities information
2. Get the venues around each borough in both cities to calculate density of restaurants
3. Identify potential of pizza restaurant by observing popularity of Pizza restaurants and the alike, Italian restaurants
4. Identify potential location for a pizza restaurant by finding the boroughs which have the highest average distance from all restaurants and choose it as potential prospect

## Results

To compare between the 2 cities, we normalize the number of restaurants in areal wise and population wise. From both perspectives, the density restaurants are much lower in Toronto so it is a good idea to opt the location with less number of competitors. Thus, we should deepen our analysis in Toronto.

City	Areal extent	Population	No. of restaurants	Areal density	Population density
New York	783.8	8.62	4224	5.389130	0.490023
Toronto	630.2	2.93	855	1.356712	0.291809

As observed from the chart below, Pizza and Italian restaurants looks very popular among Canadian citizens (both are in Top 5) so Harry's idea for pizza restaurant should correspond with local taste.



The table below shows the average distance from the competitors (Pizza restaurants and Italian restaurants) in Toronto.

Borough	Neighborhood	Distance (km)
West Toronto	Runnymede, Swansea	8.181313
East Toronto	The Beaches	7.982061
Central Toronto	Lawrence Park	7.854229
Central Toronto	North Toronto West	6.741902
West Toronto	High Park, The Junction South	6.737196

## Discussion

Further analysis on target customers should be considered to improve location of the restaurants. For example, the shop should be set up near the schools or universities.

## Conclusion

The recommended location for Harry is to open a pizza cuisine is West Toronto (Runnymede and Swansea neighborhoods) which locates far away from the others counterparts.