

# Capstone Project - The Battle of Neighborhoods



## Introduction/Business Problems

Toronto is the fourth largest city in North America and the (multi)cultural centre of Canada. The city has become an incredibly diverse melting pot for food and drink culture driven by individuals inspired to share their traditions and ideas. But in a city that prides itself on its eclectic offerings, there is one industry that has been a bit late to the party: coffee. In a province that is dominated by large coffee chains, enforcing notions of convenience over quality, it has been difficult to convert this coffee-drinking populace into specialty coffee consumers. The average customer has no problem spending a premium on a higher quality meal or a higher quality beer but has hesitated to try out the shop around the corner serving single-origin espressos and handmade pour-overs.

This project aims to target people who are passionate about having coffee to find the best establishments in the city of Toronto and for those who are interested in opening a coffee shop know the best regions to open your business.

So as part of this project, we will list and visualize all major parts of Toronto that has great Coffee shops.

## Questions that can be answered with the project

- What is the best location in Toronto for have a coffee?
- Which areas have potential Coffee Shop Market?
- Which areas lack Coffee Shops?
- Which is the best borough to stay if I want have a coffee?
- Which is the best Coffee Shop in Toronto?
- Which Coffee Shop is rated highest in Toronto?

**Foursquare API:**

This project would use Foursquare API as its prime data gathering source as it has a database of millions of places, especially their places API which provides the ability to perform location search, location sharing and details about a business.

**Approach:**

We will web scraping the Toronto data from Wikipedia and using FourSquare API we will find all venues for each neighborhood. Next step is filter out all venues that are Coffee Shops and find rating, tips and like count for each Coffee Shop using FourSquare API. Using rating for each Coffee Shop, we will sort that data and visualize the Ranking of neighborhoods using folium library.

**Libraries:**

Pandas: For creating and manipulating dataframes.

Folium: Python visualization library would be used to visualize the neighborhoods using interactive leaflet map.

JSON: Library to handle JSON files.

Geopy: To retrieve Location Data.

Requests: Library to handle http requests.

Matplotlib: Python Plotting Module.