Business Relocation Analysis and Assistance

by: Dhouha Cherif

Introduction

The goal of this project is to provide an analysis and visualizations to help entrepreneur who is willing to choose his business location to better understand **foot traffic** and **competitiveness** in every neighborhood in a city of his choice.

- Competitiveness
- Foot traffic
- Example: Toronto city
- Business: restaurant

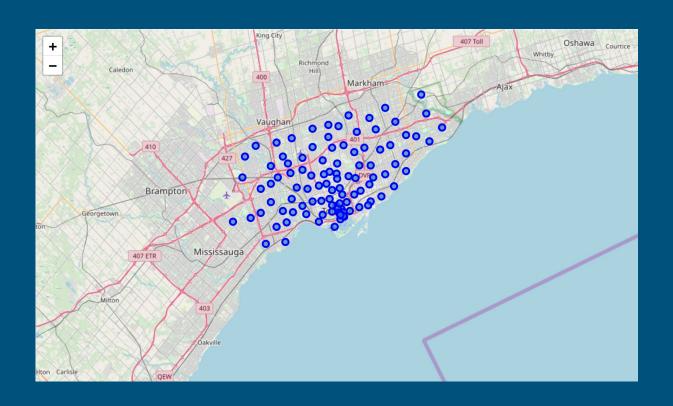
Data

- Wikipedia
- Foursquare API

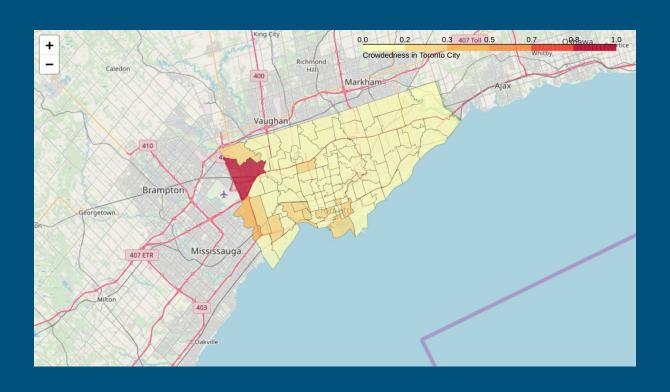
Methodology

- Web scraping and data cleaning
- Add longitude and latitude data
- Explore neighborhood in Toronto city
- Analyse venues and competitors in a given area
- Cluster neighborhood w.r.t venues categories

Toronto city neighborhood



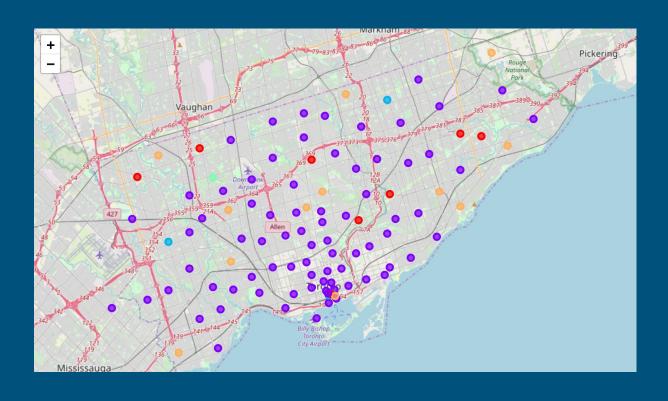
Crowdedness in Toronto city



Neighborhood profile

```
----Rouge, Malvern----
          venue freq
            700
                0.12
      Pharmacy 0.12
  Dessert Shop
                0.12
    Campground
                0.12
           Spa 0.12
----Highland Creek, Rouge Hill, Port Union----
               venue freq
0
                Beach
                       0.14
  Italian Restaurant
                      0.14
                      0.14
           BBQ Joint
      Cosmetics Shop
                      0.14
  Athletics & Sports
                      0.14
   -Guildwood, Morningside, West Hill----
                 venue freq
          Pizza Place 0.18
          Burger Joint
                        0.09
                  Park
                       0.09
  Fried Chicken Joint 0.09
        Breakfast Spot 0.09
```

Neighborhood clustering



Nearby venues and competitors for a given address and within a given radius

	PostalCode	Borough	Neighborhood	VenueName	VenueCategory	VenueLatitude	VenueLongitude
228	M5B	Downtown Toronto	Ryerson,Garden District	Elgin And Winter Garden Theatres	Theater	43.653394	-79.378507
351	M5C	Downtown Toronto	St. James Town	Fahrenheit Coffee	Coffee Shop	43.652384	-79.372719
352	M5C	Downtown Toronto	St. James Town	Pearl Diver	Gastropub	43.651481	-79.373600
353	M5C	Downtown Toronto	St. James Town	Triple A Bar (AAA)	BBQ Joint	43.651658	-79.372720
355	M5C	Downtown Toronto	St. James Town	Versus Coffee	Coffee Shop	43.651213	-79.375236
358	M5C	Downtown Toronto	St. James Town	Cambridge Suites Toronto	Hotel	43.651836	-79.378107
364	M5C	Downtown Toronto	St. James Town	Vintage Conservatory	Speakeasy	43.652229	-79.373487

	PostalCode	Borough	Neighborhood	VenueName	VenueCategory	VenueLatitude	VenueLongitude
347	М5С	Downtown Toronto	St. James Town	Gyu-Kaku Japanese BBQ	Japanese Restaurant	43.651422	-79.375047
349	M5C	Downtown Toronto	St. James Town	Terroni	Italian Restaurant	43.650927	-79.375602
350	M5C	Downtown Toronto	St. James Town	GEORGE Restaurant	Restaurant	43.653346	-79.374445
354	M5C	Downtown Toronto	St. James Town	Mystic Muffin	Middle Eastern Restaurant	43.652484	-79.372655
359	М5С	Downtown Toronto	St. James Town	NAMI	Japanese Restaurant	43.650853	-79.375887
361	M5C	Downtown Toronto	St. James Town	The Carbon Bar	Restaurant	43.653367	-79.374965
363	M5C	Downtown Toronto	St. James Town	La Bettola Di Terroni	Italian Restaurant	43.651993	-79.378056

Conclusion

- Get more data to avoid bias.
- Extend project to other possibilities.

