

Battle of Neighborhoods Toronto Food...



Introduction

- Bringing new restaurants to a new city is a lot of effort and a large expense
- Great consideration and care should be devoted to making right choices
- As they say ... "Location, location, location" is one of the most important things to consider.
- Another big part of the location is the competition which can make or break a new restaurant.
- Battle of neighborhoods tries to assist with a problem of comparing different neighborhood criteria and existing food venues.

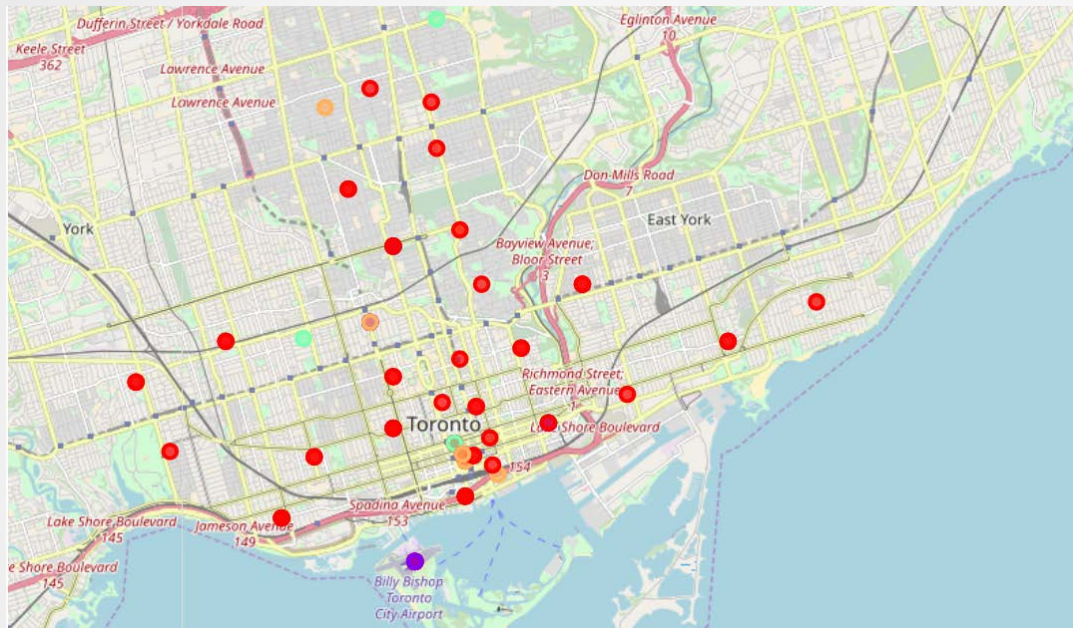
Data

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude | Venue Category |
|---|-------------------|-----------------------|------------------------|-------------------------|----------------|-----------------|--------------------|
| 0 | The Beaches | 43.676357 | -79.293031 | Starbucks | 43.678798 | -79.298045 | Coffee Shop |
| 1 | The Danforth West | 43.679557 | -79.352188 | Pantheon | 43.677621 | -79.351434 | Greek Restaurant |
| 2 | The Danforth West | 43.679557 | -79.352188 | Dolce Gelato | 43.677773 | -79.351187 | Ice Cream Shop |
| 3 | The Danforth West | 43.679557 | -79.352188 | Messini Authentic Gyros | 43.677827 | -79.350569 | Greek Restaurant |
| 4 | The Danforth West | 43.679557 | -79.352188 | Cafe Fiorentina | 43.677743 | -79.350115 | Italian Restaurant |

Data like the sample above provides great base for analyses and decisions. In this project it is aggregated from combination of commercial and public data. Commercial data comes from <https://developer.foursquare.com/> API and has useful up-to-date data on restaurants in based on geo location. Public data comes from wiki pages and http://cocl.us/Geospatial_data and helps us to get the zip codes, administrative names and Geo data for the neighborhoods. See the final report for more data description and samples

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Results



The above map shows different neighborhoods clustered based on the most usual restaurant types.

Though expectedly the results show a good coverage (distribution) of food venues, the resulting datasets indicate several neighborhoods with lower concentration of specific restaurants making them prospective candidate for potential new location for new restaurants. Additionally, tools are provided to easily examine various types of possible cuisine and how it would stack up against the current competition.

Discussion

| | Italian Restaurant | Pizza Place | Others | Total | Borough | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue |
|---|--------------------|-------------|----------|-------|------------------|-----------|------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Neighborhood | | | | | | | | | | | | | |
| Adelaide | 0.016393 | 0.016393 | 0.967213 | 1.0 | Downtown Toronto | 43.650571 | -79.384568 | 0.0 | Coffee Shop | Café | Thai Restaurant | American Restaurant | Steakhouse |
| Berczy Park | 0.035714 | 0.000000 | 0.964286 | 1.0 | Downtown Toronto | 43.644771 | -79.373306 | 4.0 | Coffee Shop | Restaurant | Steakhouse | Bakery | Café |
| Brockton | 0.090909 | 0.000000 | 0.909091 | 1.0 | West Toronto | 43.636847 | -79.428191 | 0.0 | Coffee Shop | Breakfast Spot | Café | Burrito Place | Italian Restaurant |
| Business reply mail Processing Centre969 Eastern | 0.000000 | 0.250000 | 0.750000 | 1.0 | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |

The sample chart shows distribution of Italian Restaurants and Pizza Places against the top ten food venues in the neighborhood and cluster

The results indicate several neighborhoods with lower concentration of specific restaurants making them prospective candidate for potential new location for new restaurants. It also shows the specific (cuisine) and general (any existing restaurant) level of competition in eaach neighborhood/cluster.

In general of course, the research shows that Toronto as a major world capital is very diverse and has a wide variety of Food venues. Further research is likely needed to estimate various factors like commercial real estate leasing data, neighborhood density, median incomes, trends, parking and transportation issues etc. But the provided research is a good first step for concentrating the search more specifically

Good luck and Buon Appetito