Finding the Neighborhood of Toronto with the most Ice Cream Shops

Mike Koop

April 24, 2020

# Introduction:

To determine the neighbourhood with the best access to ice cream shops in the city of Toronto.

# Data:

The data required for this assessment will be:

[https://en.wikipedia.org/wiki/List\_of\_postal\_codes\_of\_Canada:\_M,](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M) Wikipedia’s list of Toronto postal codes. The data will be scraped to create a data frame.

A link to a csv file that has the geographical coordinates of each postal code: [http://cocl.us/Geospatial\_data](https://cocl.us/Geospatial_data) in Toronto.

Using Foursquare to get the locations of the ice cream shops in Toronto and displaying this information visually on a chart. The highest density of ice cream shops per neighbourhood will have the best access to ice cream.

# Methodology:

Data was scraped from the Wikipedia page for the list of Canadian Postal Codes beginning with ‘M’. This letter is used for the Toronto Area. The Neighbourhoods were then cleaned up to only reflect Postal Codes in use, dropping ‘not assigned’ values.

Latitude and longitude coordinates of each neighbourhood (linked to the Postal Codes) was then collected from <https://cocl.us/Geospatial_data> which is a link to a CSV file that has the coordinates of each Postal Code beginning with the letter ‘M’.

The two separate dataframes where then joined and the data cleaned to only display Toronto. Venue names of all the shops in all the neighbourhoods were then imported from foursquare. ([https://api.foursquare.com/v2/venues/explore?&client\_id={}&client\_secret={}&v={}&ll={},{}&radius={}&limit={}](https://api.foursquare.com/v2/venues/explore?&client_id=%7b%7d&client_secret=%7b%7d&v=%7b%7d&ll=%7b%7d,%7b%7d&radius=%7b%7d&limit=%7b%7d)) This data was then built into the dataframe containing the geospatial data, a table was generated with the neighborhoods, location, venue name, and category. This table was further reduced to only display ice cream shops and neighborhoods. Finally, a bar chart was created to visually display the neighborhood with the most ice cream shops.

# Results:

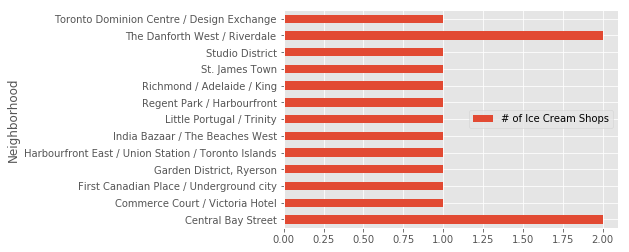


Figure 1: Ice Cream Shops by neighborhood

As shown above (Figure 1), the neighborhoods with the most ice cream shops are Central Bay Street and The Danforth West / Riverdale.

# Discussion:

Clearly the neighborhood with the best access to ice cream is a tie between Central Bay Street and The Danforth West / Riverdale.

# Conclusion:

The neighborhood with the best access to ice cream is a tie between Central Bay Street and The Danforth West / Riverdale. Using Python, Panda’s, Foursquare, Matplotlib, and other libraries, this can easy be obtained and displayed visually.