

Toronto Neighborhoods & Venues

by Yamar Ba

Intro.

Suppose you have a friend who lives in New York City. They plan to move to Toronto, Canada but they want to live in an area similar to their neighborhood in downtown manhattan where there are many cafes, restaurants and shops.

Problem

Suppose your friend enlists you to help them find a neighborhood that suits their needs. Which Toronto neighborhood should they live in?

The first approach to this problem is to collect all of the data and tools to make the best possible decision.

Data/ Resources:

- 1) The following wikipedia page with Toronto neighborhoods categorized:
https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
- 2) Geospatial coordinates CSV file, with longitude and latitude coordinates of neighborhoods categorized by zip code.
- 3) Foursquare software will be utilized. local search-and-discovery mobile app which provides search results for its users. The app provides personalized recommendations of places to go near a user's current location based on users' previous browsing history and check-in history.

Methodology

The data from the wikipedia page will be extracted using the software BeautifulSoup. BeautifulSoup is used to extract tables from websites. Once the table is extracted, it will be imported into our dataframe. Similarly, the geospatial coordinates CSV file along will also be added into our dataframe. The two tables have a common feature and that is they both have a column for zip codes. The two tables will be joined by zip code.

Once are dataframe is set. We then utilize Foursquare to explore Toronto neighborhoods. We want to see all the venues the Toronto area provides for our consideration. Specifically, we are looking for neighborhoods with cafes, restaurants and shops.

The dataframe is then clustered. Four clusters are created. Each cluster has all the popular venues we need in our decision making. Each cluster represents a top neighborhood. Once clustered in the dataframe, the dataframe is them visualized.

Conclusion

The cluster with that best fits our model will represent the best neighborhood for our friend. The neighborhood that we would recommend our friend to move to in Toronto, is Downtown Toronto. It has all of the amenities they are used to in New York City.