

THE BATTLE OF NEIGHBORHOODS

(Business Case)



Introduction

Several people moving to multiple states of Canada require the output at extraordinary housing costs similarly to incredible rating schools for their children. The endeavours expect to make an examination of features for territory as a comparative assessment between neighbourhoods. The features join centre house cost and school assessments, bad behaviour rates, atmosphere conditions, recreational workplaces. This would assist people with getting the awareness of the spots before moving to another country, state, city or spot for their work or to start another life.

The purpose of this project is to assist people with researching various possible results and take an unrivalled decision on choosing the best neighbourhood from multiple zones in Scarborough city subject to the flow of various workplaces in and around that territory.

Problem and Purpose of this Project

The data set includes the coordinates of the cities/neighbourhoods in Canada. However, it does not include the venues within these locations. If we had the venue information, we could easily find out more information about the neighbourhoods. For example how many schools in the area around houses? How many restaurants are there, are there parks or cinemas? What about banks and grocery stores? If all this information is known, we could better understand or make an educated decision about where to move or relocate to. Hence, the purpose of this project is to, algorithmically, find a way to use the location coordinates and tag each data point into a neighbourhood the algorithm used is k-means clustering. The main idea is to determine neighbourhoods with venues clustered around each other so that one can decide on the right neighbourhood to choose based on the proximity of amenities and venues to each other.

Location

Scarborough is a standard objective for new labourers in Canada to abide by. In this manner, it is a champion among the most contrasting and multicultural zones in the Greater Toronto Area, being home to multiple strict get-togethers and spots of adoration. In spite of the way that development has transformed into an intriguing issue with regards to the course of late years with more governments searching for more restrictions on outsiders and dislodged individuals, the general example of movement into Canada has been one of on the climb.

Foursquare API

This venture would utilize Four-square API as its prime information gathering source as it has a database of a great many spots, particularly their places API which gives the capacity to perform area look, area sharing and insights regarding a business. Specifically, the data contain City Name, County Code, County Name, Density, Id, Latitude, Longitude, Source,

State Id, State Name, and Time zone. Though this data came with the coordinates, I was not sure how good it is so the coordinates were removed leaving the city, county, state names, etc. Tableau was used for geocoding the data to obtain the correct coordinates. The data was then exported and converted into a .Json, read into a pandas data frame and sliced into Scarborough and the Greater Toronto Area data for use in the project. Besides this data, the Foursquare API was to be used to collect venues near the neighbourhoods for cluster analysis to be performed on the data.

Analysis

To examine the similarities of two urban zones, we decided to explore neighbourhoods, segment them, and social afford them into gatherings to find relative neighbourhoods in a significant city like New York and Toronto. To have the ability to do that, we need to gather data which is a sort of solo AI: a k-suggests bundling computation.

Libraries

Pandas: For making and controlling information outlines

Folium: Python representation library would be utilized to image the areas group dispersion of utilizing intelligent handout map.

SciKit Learn: For bringing in k-implies bunching

JSON: Library to deal with JSON documents

Geopy: To recover Location Data

Requests: Library to deal with HTTP demands

Matplotlib: Python Plotting Module