THE BATTLE OF NEIGHBORHOODS: Downtown Toronto Vs West Toronto

Introduction:
Toronto is the largest city in Canada and an economically viable place in terms of business, finance, entertainment, technology and so on. With a population of about 3 million people, the city is ranked as one of the most livable cities in the world according to the report by the Economist Intelligence Unit (City of Toronto, 2019). Within the city of Toronto, Downtown Toronto can boast of the city's main business areas and the most culturally diverse city in Toronto, Ontario. My friend(Tunde) and I, have lived in a popular neighborhood within Downtown Toronto for more than a decade now and recently, he shared his intention of leaving downtown for another unknown city in Toronto. Tunde wants a neighborhood that is similar to his current borough because he feels that would help him settle easily.

Question:
As a data scientist, can I look for another neighborhood in Toronto with similar features for Tunde? Tunde is fun-loving and would prefer a place that is considerably dense in population.

Approach:
I will use pandas to scrape and explore the Canada dataset, an html file that contains Canada postcode, borough, and neighborhoods. I will also scrape the Canadian population information html file and merged it with the previous data frame. I will extract the top two populated boroughs in the data frame and utilize foursquare API to explore each of their neighborhoods. I will use K-means to cluster and segment their neighborhoods into 5 clusters and visualize the cluster on a Map of Toronto using the Folium Library. Furthermore, I will also explore the top 10 neighborhoods with the highest number of restaurants using the foursquare API and visualize on a horizontal bar graph. Also, I will check for the top 5 restaurants in the neighborhoods and will give suggestions based on results.

Data Collection/Sourcing:
The dataset used for my analysis are found in the links below;
Canada data: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
Population Information: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/Table.cfm?Lang=Eng&T=1201&SR=1&S=22&O=A&RPP=9999&PR=0
Geocoordinates of Canada by Postal codes: http://cocl.us/Geospatial_data

References

Toronto, C. O. (n.d.). *World Rankings for Toronto.* Retrieved October 14, 2019, from www.toronto.ca: https://www.toronto.ca/city-government/data-research-maps/toronto-progress-portal/world-rankings-for-toronto/