Battle of Neighborhoods

IBM Data Science Professional Certificate

Capstone Project

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Introduction

- **An Indian restaurant chain is looking to start and expand their operations in Canada. They want to understand what their starting point and expansion strategy should be.**

- **Business problem:** Where (which location) to open an Indian restaurant in Canada?

- **Target audience:** An Indian restaurant chain looking to start and expand in Canada. Restaurant industry interested in starting and expanding operations in Canada.

- **Purpose:** This analysis will give the audience a starting point for their expansion

Choice of city – Toronto...Why Toronto?

- Since Toronto is the most populated city of Canada, and one of the more important business centers in Canada, we would finalize the city to start with as Toronto based on secondary research on the internet. The objective now is to find a suitable location/area in Toronto to open the 1st restaurant and also look for potential expansion locations

Data Sources – 1/2

- **Neighborhoods:** https://open.toronto.ca/dataset/neighbourhoods/. This file is the GeoJson file for plotting on the map. It has the latitudes and longitudes of 140 neighborhoods in Toronto

- **Toronto Neighborhood Profiles: https://open.toronto.ca/dataset/neighbourhood-profiles/** This data has the demographic and socio-economic profile of the people living in 140 neighborhoods in Toronto e.g.
  - Total Population, South Asian population, Income

Data Sources – 2/2

- **Foursquare location data –** This will be used to find relevant venues in the 140 neighborhoods. This will help us decide which location suits best for opening Indian restaurant(s)

Methodology/Approach – 1/2

- We needed to identify neighborhoods that had:
  - High total population
  - High south Asian population
  - People with high income after tax
  - More young people
- The data was then normalized and neighborhoods were assigned a score based on the above factors
- Based on these factors, top 20 the neighborhoods were identified

Methodology/Approach – 2/2

- Using Foursquare data, the Total number of restaurants and number of Indian restaurants were found in the **top 20** neighborhoods

- "Restaurants per South Asian" residing in the top 20 neighborhoods (found above) were calculated

- Presence of Indian restaurant in the locality were also considered

- Neighborhoods were arranged in ascending order of restaurants per South Asian and top 3 were identified as key locations

- Neighborhoods with lesser number of restaurants per capita provided a higher potential opportunity to open the restaurant

Results (Scenario 1) – In the Python notebook
Identifying top 3 neighborhoods

- If we consider venues within **500 m** radius, we find the top 3 locations as:

- 1. Malvern

- 2. Kennedy Park and

- 3. Eglinton East

- are the Neighborhoods where many South Asians live, people have a high post-tax income and number of restaurants per South Asian population is low, and there are no Indian restaurants in the area

Recommended locations – bigger circle represents bigger opportunity
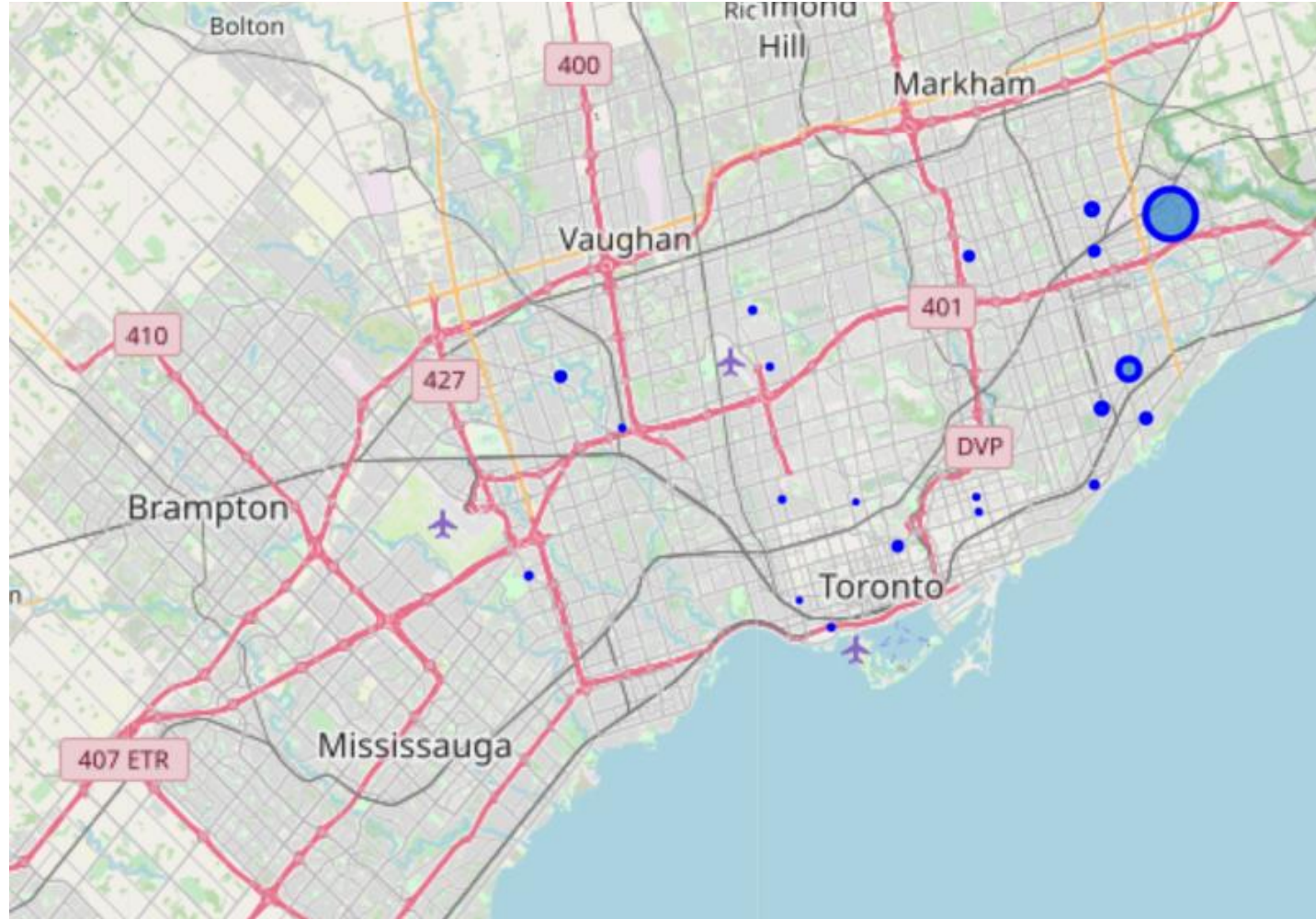
Results (Scenario 2) – Evaluated but NOT in the Python notebook on GitHub

- If we consider venues within **1,000 m** radius, we find that

- 1. Malvern and

- 2. Eglinton East

- are the Neighborhoods where many South Asians live, people have a high post-tax income and number of restaurants per South Asian population is low, and there are no Indian restaurants in the area. Kennedy Park is replaced by

- 3. Agincourt North where there are 2 Indian restaurants within 1 Km radius but still per South Asian restaurant is still low and there is potential to open the restaurant

Recommendation

- Recommendation is to start by opening a restaurant in Malvern neighborhood as it has a low restaurant penetration

- Expansion can be followed up in neighborhoods like Eglinton East, Kennedy Park and Agincourt North