Coursera IBM Data Science Certification

The Battle of Neighborhoods

New Barbershop in Toronto

Final Report

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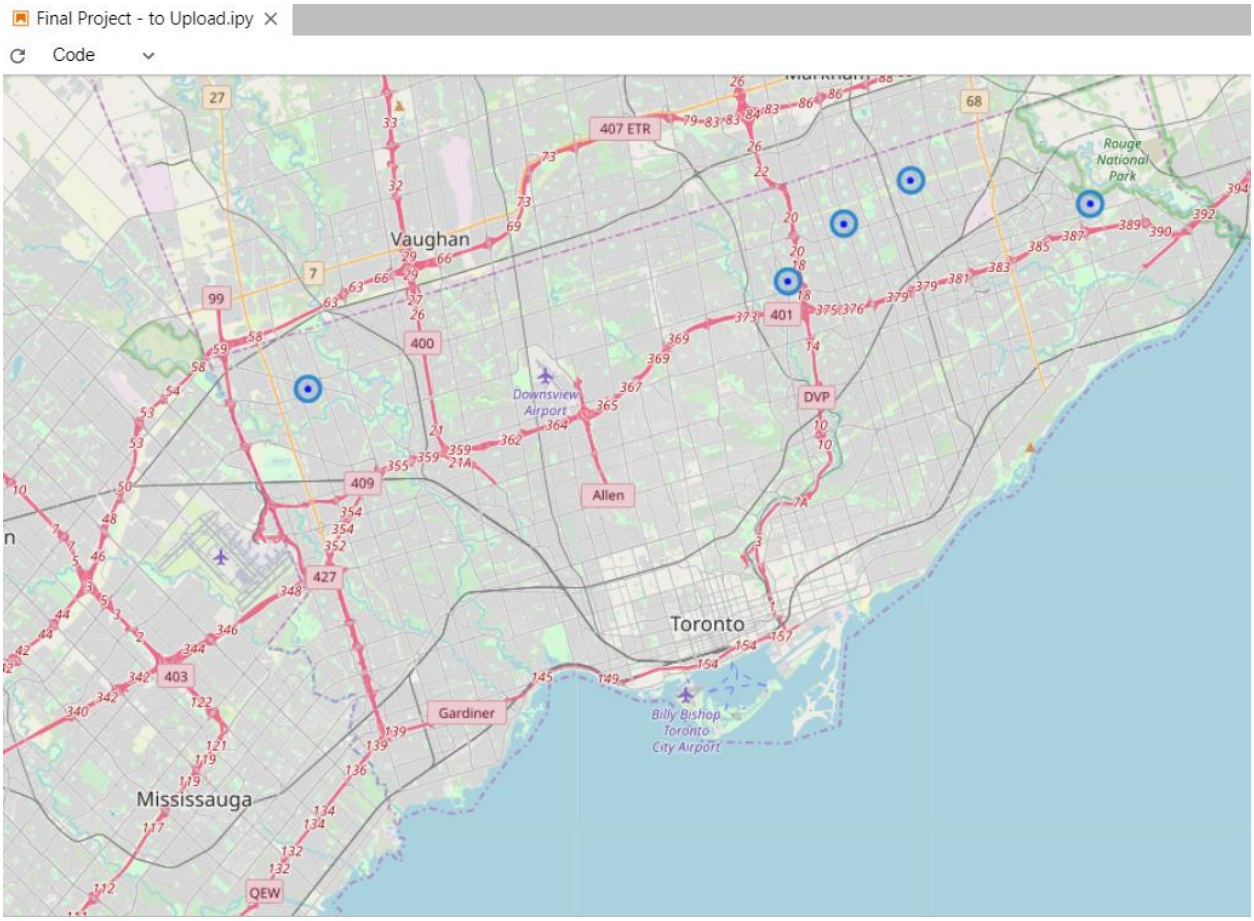
Problem Statement:

A new comer to Toronto wants to open a new barbershop, preferably in a populated postal code, with no or little competition. For this reason, the new investor is only interested in checking a score that reflects the ratio of population to competitor per postal code, to identify the top 5 postal codes to consider.

Executive Summary:

By looking at the population size and the number of competitors per postal code, the following 5 postal areas ranked the highest. Note that all of them are the periphery of Toronto.

Rank	Postal Code	Population	Competitors	Normalized Score
1	M1B	66,108	0	100.0
2	M2J	58,293	0	88.2
3	M9V	55,959	0	84.7
4	M1V	54,680	0	82.7
5	M1W	48,471	0	73.3



Limitation of this work:

The limitations of this work stem mainly from:

1. The assumption that population and number of competitors per postal code, suffice to make a business decision or start a business plan
2. Accuracy of the data provided by the sources:
    a. Population 2016 figures
    b. Coordinates accuracy depends on geopy
    c. Competitors data depends on the accuracy and limitations of Foursquare API)

Technical Work:

1. Load the required libraries
2. Data Acquisition
    a. Population per postal code
    b. Coordinates of postal Code
    c. Foursquare businesses
3. Data Cleaning and Aggregation
4. Data manipulation
5. Results Display

Data Sources:

1. Population Data: Link
2. Postal Codes Coordinates: https://cocl.us/Geospatial_data
3. Foursquare API Category 4bf58dd8d48988d110951735 (Salon/Barbershop)