Coursera Capstone – "The Battle of the Neighborhoods"

Comparative analysis using location data via Foursquare.

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Problem Statement

By being great places full of opportunities and lots of differentiated restaurants, Toronto has a population of 2.7 million vs. Paris with 2.1 million, I decided to start a new business opening an Italian restaurant and will analyze where is the best place to between Toronto and Paris by checking other similar places around.

The mission of this project is to use Foursquare location data and regional clustering of venue information to determine what is the best location to open a new Italian restaurant.

Data Overview

I will be using Foursquare locations of Toronto and Paris to analyze what will be the best choice.

Data Exploration

Using clustering techniques developed in prior exercises, we will examine the most common venues by neighborhood listed in Foursquare

By using the KMeans clustering algorithm I will be clustering Italian restaurants in Toronto and using the elbow method to determine the optimal number of clusters. In Paris will also do the data wrangling setup by defining the postal codes and neighborhood names, getting center coordinates of each neighborhood and Paris using Nominatum.

Final Recommendation

By checking that, we will know where we have more Italian restaurants, population, if historic Italian neighborhood and get some details from Wikipedia to compare.

Conclusion

There are more Italian restaurants in Paris than in Toronto:

There are 350 Italian restaurants in Toronto

There are 515 Italian restaurants in Paris

Source: Wikipedia

This difference is not because of a difference in population (Toronto has a population of 2.7 million vs. Paris with 2.1 million)

Toronto proper is significantly larger in area (630 sq. km) than Paris (105 sq. km)

We conclude that Paris is more densely populated with Italian restaurants, but they are arranged in a larger number of clusters than in Toronto. This is likely because there is no historic Italian neighborhood in Paris.