COMPARING TORONTO WITH THE MOST IMPORTANT SOUTH AMERICAN CITIES

WHICH TORONTO'S NEIGHBORHOODS ARE MORE LIKE SAO PAULO (BRAZIL), BUENOS AIRES (ARGENTINA), ASUNCION (PARAGUAY) AND MONTEVIDEO (URUGUAY)?

INTRODUCTION

In this context, this project aims to compare 4 major South American cities with Toronto neighborhoods and find those that are most like these cities.

The cities analyzed will be:

- Sao Paulo (Brazil),

- Buenos Aires (Argentina),

- Asuncion (Paraguay) and

- Montevideo (Uruguay).

DATA (1/2)

The analysis of this project will include the following data:

• Foursquare API, which will provide the most common establishments from all analyzed locations (Toronto, Canada + 4 South American Cities described at introduction): https://developer.foursquare.com/

• List of Neighborhoods and Postcodes in Toronto, provided by wikipedia, that will serve as the basis of Toronto's analysis: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

• Toronto geospatial data, Where will we have the coordinates of each neighborhood of Toronto: https://cocl.us/Geospatial_data.

• Geopy Geocoders, which will be used to convert the location of the 4 south American cities into geographic coordinates: https://pypi.org/project/geopy/
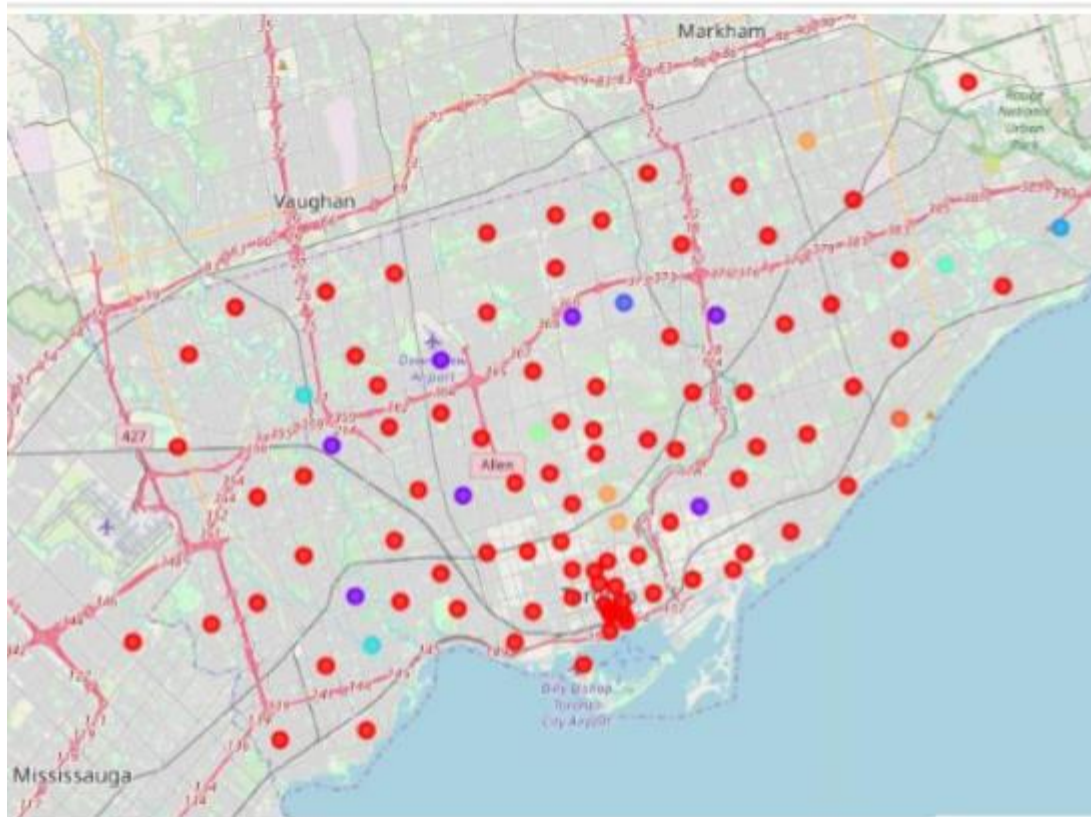
DATA (2/2)

- For this project, we will create a database that will contain the neighborhoods of Toronto and the 4 South American cities analyzed, with their respective commercial establishments and geographic information.

- A connection has been made to the Foursquare. The combined database found 292 unique venues containing 2535 rows per 292 columns.

- Kmeans algorithm clustered all neighborhoods into 10 clusters based on the venues. Cluster distribution was highly concentrated in cluster 1, which contained 89 neighborhoods, including the 4 South American cities.

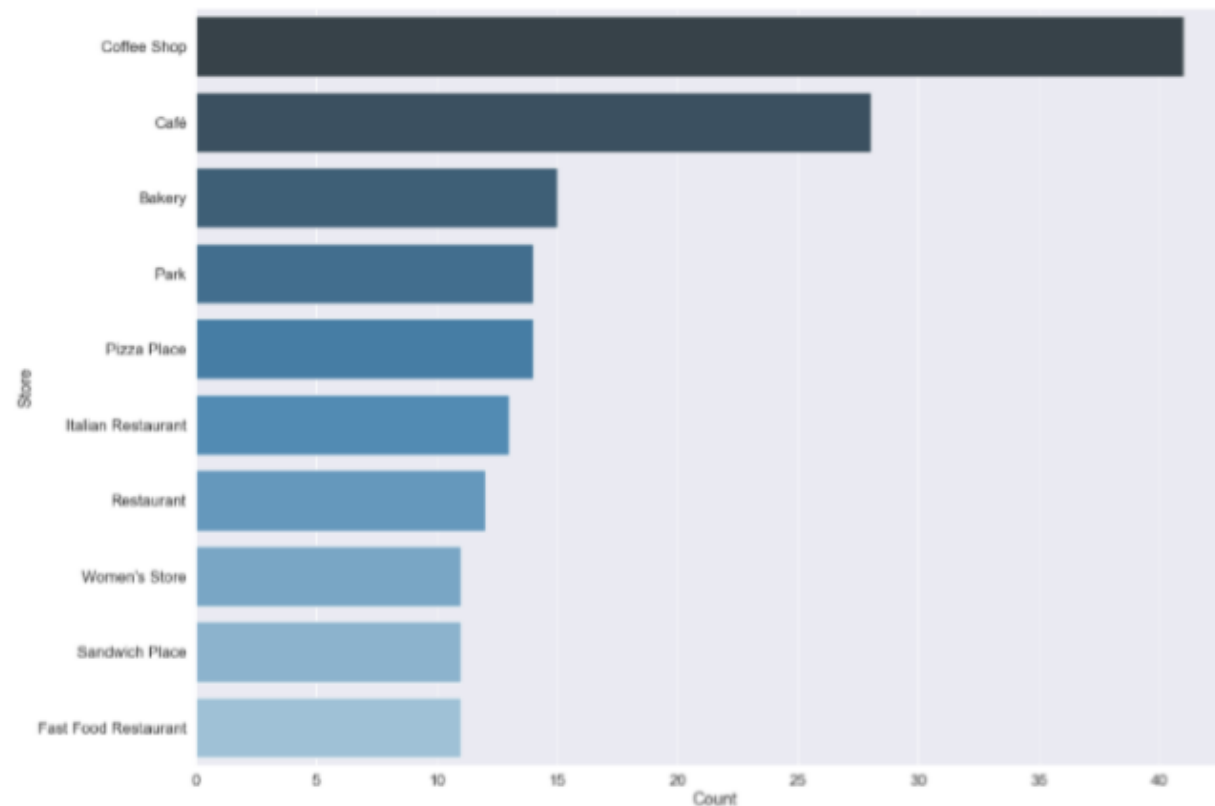- Cluster 1 is quite abundant in coffee shops and cafes and generally contains plenty of restaurants.

RESULTS (1/2)

- Most of the data was in cluster 1, as well as the South American cities.

RESULTS (2/2)

- In this cluster are neighborhoods like GuildwoodMorningside, East Birchmount Parklonview, Kennedy Park, West Hill, Clarks CornersSullivan, Tam O'Shanter. We can see below that the most common venue is Coffee Shop by far, followed Cafés, Bakery, Parks... .

CONCLUSION FUTURE DIRECTIONS

- In this work we take public data from neighborhoods of Toronto, Canada (list of neighborhoods and geographic information) as well as the location of 4 major Latin American cities (Sao Paulo - Brazil, Asuncion - Paraguay, Buenos Aires - Argentina and Montevideo - Uruguay).

- A connection has been made to the Foursquare. The combined database found 292 unique venues containing 2535 rows per 292 columns. Kmeans algorithm clustered all neighborhoods into 10 clusters. The Cluster distribution was highly concentrated in cluster 1, which contained 89 neighborhoods, including the 4 South American cities. This cluster is quite abundant in coffee shops and cafes and generally contains plenty of restaurants.

- Concentration in cluster 1 was too large and additional studies are likely to be needed to improve results.