BEST LOCATION FOR A PORTUGUESE RESTAURANT IN TORONTO

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- With the globalization of food, people have tended to want to try new cuisines. Portuguese cuisine, despite influencing other cuisines, due to colonization, is little known.
- As such, my client wants to open a typical Portuguese food restaurant in Toronto, ON.
- The objective of this project is to find the best localization to open a Portuguese restaurant in Toronto, ON.
- Competition, offers and populational areas are the áreas of interest for a good localization.

DATA ACQUISITION

- Neighborhoods in Toronto --'https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M'.
- Population in Toronto -- 'https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/Tables/CompFile.cfm?Lang=Eng&T=1201&OFT=FULLCSV'
- Using Geopy to get geological location by address name.
- Using geospatial data of Borough of Toronto --'https://raw.githubusercontent.com/BlizzWiz/IBM_Capstone_Project/master/toront o_m.geojson'
- Using Foursquare API to get the most common venues of given Borough of Toronto.
- Using Foursquare API to get the venues' record of given venues of Toronto.

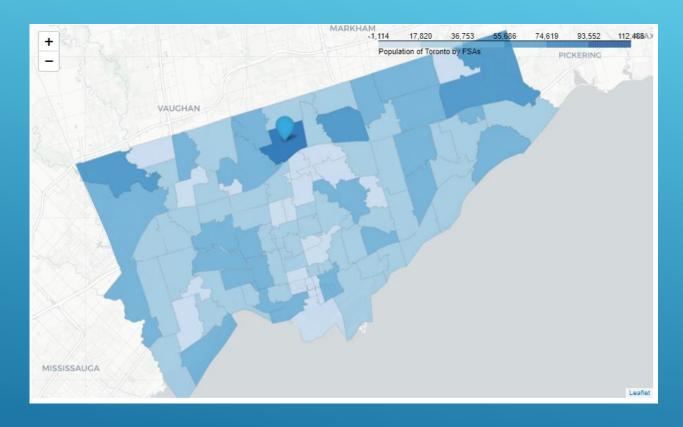
DATA CLEANING

- First we used Beautifulsoap 4 as a web scraping package to get the Postal Codes, boroughs and neighborhoods from Wikipedia and organize a table. Then i used the GeoSpatial Dataset with the coordinates of each postal code provided in week 3 and merge a table with postal codes, boroughs neighborhoods, latitude and longitude from Toronto.
- Then we gathered the population data of Toronto, latest as of 2016, by Forward Sortation Area (FSA) from the Statistics Canada and created a single table. For that purpose we extracted the useful columns, such as geographic code, province and population data and then, merge the two tables.
- To help with the data visualizion we created a cloroplethmap of Toronto population density.
- For last we used the foursquare API to get all the top venues, restaurants and Portuguese Restaurants.

METHODOLOGY

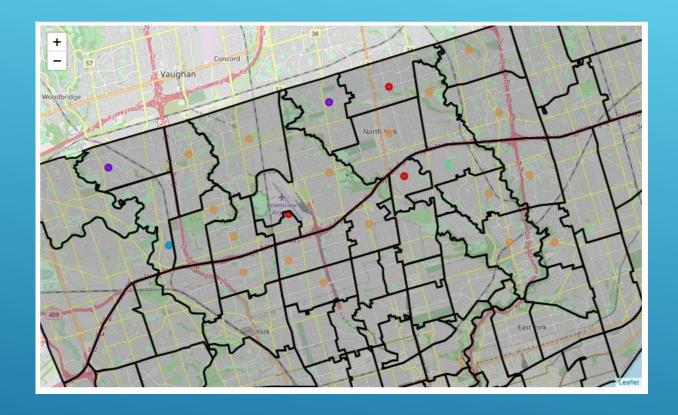
- After we realized North York was the densest Borough, we decide to explore (using the Foursquare API) the top venues, restaurants and Portuguese restaurants near de centre area and confirm if it would be a good localization.
- In order to confirm if the centre of North York (Willowdale) was a good localization, we decide to explore the venues, restaurants and Portuguese restaurants, and then segment and group similar neighborhoods. To be able to do that, we used K-Means Clustering approach (unsupervised machine learning).

CLOROPLETHMAP OF TORONTO POPULATION DENSITY



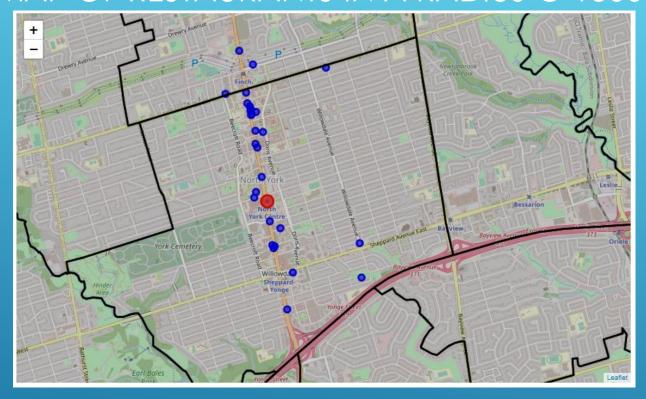
North York is most dense borouth with 658944 people.

MAP OF CLUSTERS NEIGHBORHOOD



> From the 6 boroughs near North York 4 have diffrent offers.

MAP OF RESTAURANTS IN A RADIUS O 1500 METERS



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Symposium Cafe Restaurant & Lounge
                            Cottage Restaurant
                          Lee Town Restaurant
              Shanghai Chinese Restaurant 상해반점
      Restaurant At Novotel North York Toronto
                              Trio Restaurant
               Koryo's Korean Restaurant & Bar
                    Leetown Chinese Restaurant
                        Chattanooga Restaurant
                          Bei Jing Restaurant
10
                              Hunan Restaurant
11
                          The Party Restaurant
12
                      Kimbab Korea Restaurant
13
               Salt & pepper Korean Restaurant
14
                    Hamaru Japanese Restaurant
                           Tah Deeg Restaurant
15
16
                 Pearl City Chinese Restaurant
17
                        Totanj Nat Restaurant
18
         Michi Japanese Restaurant & Sushi Bar
19
                   Shanghai Xueyuan Restaurant
                    Hooraiya Sushi 자매 족발 & 보쌈
20
21
                    Paradise Korean Restaurant
                               Mot Na Son 맛나손
22
23
24
25
                           Ichiban Fish House
          Buk Chang Dong Soon Tofu 북창동 순두부 돌솥밥
                              Jungsoo Nae 정수네
26
                                     Paisano's
                                   Nak Won 낙원
27
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In radius of 1500 meters the only cuisine more similar to Portuguese cuisine is a Pizza place (Italian).

MAP OF THE NEAREST PORTUGUESE RESTAURANT



0 Portuguese Chicken Place

The nearest Portuguese restaurant from North York center is about 5000 meters in Yorkdale.

RESULTS

- Through the analysis we realize that the most populated area in Toronto is North York.
- ► The 6 boroughs near North York, 4 have diffrent neighborhood offers.
- In radius of 1500 meters the only cuisine more similar to Portuguese cuisine is a Pizza place (Italian).
- The nearest Portuguese restaurant from North York center is about 5000 meters in Yorkdale.
- North York Centre, Willowdale, is a good localization for the Portuguese Restaurant.

CONCLUSION

- We find that there is a lot of Asian food near the North York Center (Willowdale) and the nearest Portuguese restaurant is about 5000 meters making a good candidate location, based on population density and Portuguese/ Mediterranian Cuisine competition.
- However this is a preliminary and small study. And in order for a more accuracy decision, we should have to take in account more extra data, as rental prices, parking and public transport.