

A new Italian restaurant in Toronto: where to place it?

IBM Data Science Certificate – Final Report

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Abstract

After the numerical analysis of Toronto neighbourhood, we have identified the areas where the level of competition, for an Italian restaurant, is high or low. We have found the number of total restaurants in Toronto and the most common venues for each neighbourhood. A map with the clustered venues makes it easier to identify the areas of high venues density and vice versa.

Introduction

Aldo is 35 years old and moved from Milan to Toronto. He has 15 years of experience as Italian chef and now wishes to get started with his restaurant in Toronto. Since he is not familiar with the city, we will try to help him with some data to decide which is the appropriate neighbourhood for his activity.

Among other things, Aldo need to know:

- the level of competition on each neighbourhood
- which are the most dynamic neighbourhoods
- have an idea of Toronto neighbourhoods

Methodology

We use Foursquare API to collect data for each Toronto neighbourhood, and analyse them in Python. Our analysis has the aim to carry out these inquiries:

- Identify the number of Italian restaurants on each neighbourhood
- Identify the number of hotels on each neighbourhood, as people who move for pleasure or business have high likelihood to be client segment
- Identify ten most common activities for each neighbourhood

Furthermore, we use folium to create a map of Toronto city and use plugins function to group markers into different clusters, this make easier identification of areas with higher density of venues.

In our work we have use different defined function, very useful and necessary to complete the analysis. More details of this functions can be found in the attached notebook.

Results

At the higher level of competition, we have found that 387 restaurants are present in Toronto. Making a more detail analysis we have seen that 69 of them offer a Mediterranean and European cuisine. The number of Italian restaurants in Toronto is 41. Furthermore, we have found that are 34 hotel presents in Toronto.

The area between University of Toronto – St James Town – Berczy Park has the higher density of venues, there are 41 venues. The second most dense are is located between The Danforth West – Studio District, there are 13 venues. The third most dense area is located between High Park – Runnymede – Parkdale, there are 5 venues.

Central Bay Street and The Danforth West are the neighbourhoods with high level of competition, they have Italian Restaurant as 2nd most common venue. At the same time Danforth West has a high level of Greek restaurants, they are the 1st most common venue of the neighbourhood.

There are 20 neighbourhood that do not have an Italian restaurant among ten most common venues.

Conclusions

In our opinion neighbourhoods Studio District; Richmond, Adelaide, King; Davisville North are three dynamic areas and do not have Italian restaurants among the 10 common venues. They can be a good starting point to evaluate the placement of the new restaurant.

Our work is focused in analysis of the data, before the final decision is necessary to make an economic and financial analysis, all aspect that are outside the scope of this report.

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