

Open a restaurant in Toronto

Introduction

Importance:

Opening the restaurant in the right place may bring additional profit to the business.

Idea:

Then, I will explore the top venues of each neighborhood. Based on the result, I will highlight the neighborhoods that have the following features:

- 1) high public flow (close metro stations, a lot of business centers, gyms)
- 2) low number of already functioning restaurants

Based on the result, I will set the down threshold for number of those venues and upper threshold on number of already open restaurants

The data will be divided in two types (neighborhoods that fit the restaurant opening, and the other that do not)

Data utilization

The latitudes and longitudes will be taken from a .csv file using a BeautifulSoup object. The geolocator will be used to locate Toronto and folium will be used to generate maps.

First, the neighborhoods will be placed on the map. Then, using Foursquare, I will search for top venues and sum the number of parks, gyms, theaters, shops and existing restaurants per neighborhood. I will give points to each neighborhood as follows: 2 points per park, 1 point per shop, 1 points per gym, 2 points per theater.

Neighborhoods having maximum number of points, and having less than 3 restaurants in the neighborhoods will be highlighted on the map as good places to open a restaurant.

Methodology

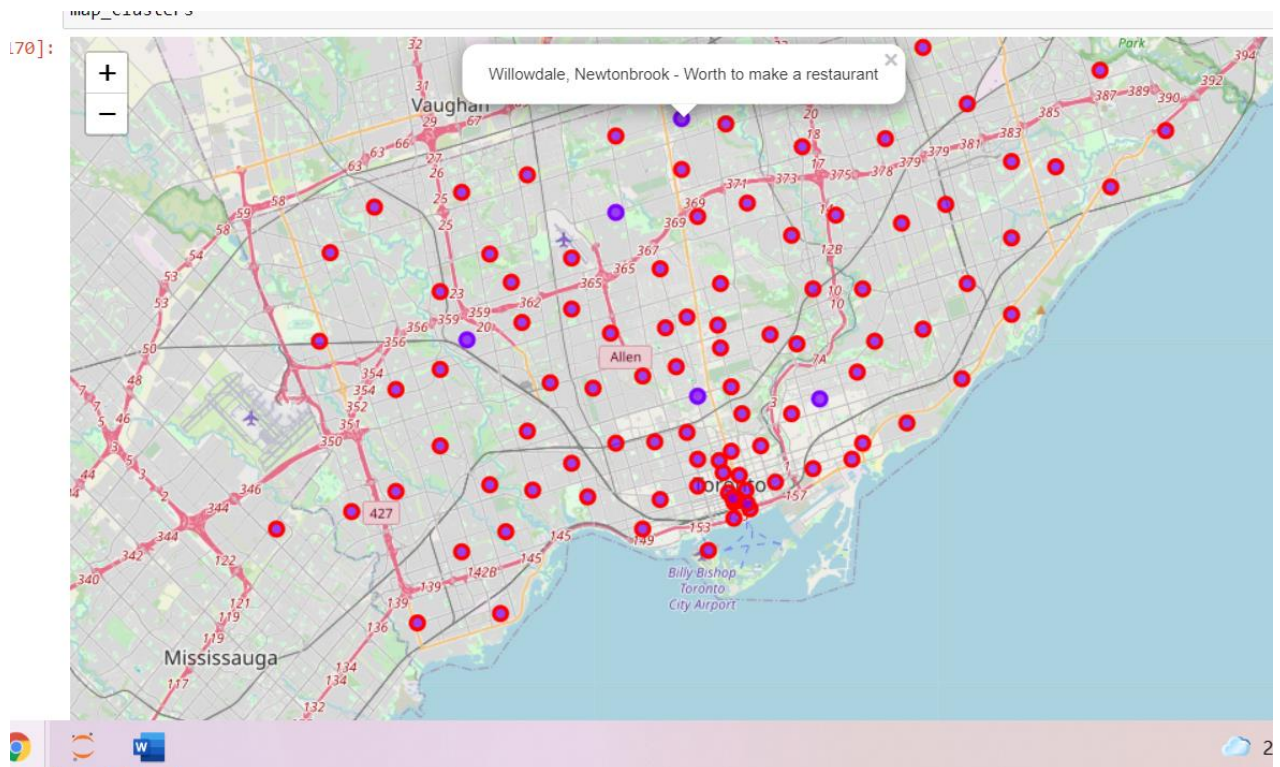
Methodology includes finding out the top venues in each neighborhood. Then, the venues are characterized by the presence of parks, theaters, gyms and shops, which are important to keep a flow of people that could potentially pass by the restaurant. And also we find the neighborhoods with least number of existing restaurants < 3 , to reduce the competition. Once we sorted the data for the

best neighborhoods, we take only 5 neighborhoods that have less than 3 restaurants. After this we plot them on a folium map with a different color.

Results

Based on this program we can easily locate the neighborhoods potentially good for opening a restaurant (violet color). The other points are highlighted in red. The map is interactive and has corresponding labels of the 'name of neighborhood', 'if it's worth to make a restaurant there'.

The final map can be seen below.



Discussion

This way uses all the methods described in the course, except for K-means clustering. This can be done, if there is another idea of neighborhood sorting algorithm. The current approach is quite handy to highlight the potential best locations to open a restaurant. This can be reinforced with additional criterions: for instance, if there are a pizza shops or bars in the neighborhood.

Conclusion

This work gives you the impression where one could open a restaurant in Toronto under certain conditions. This approach uses location data of Foursquare and folium maps. The workflow is going through web-scraping and panda dataframe processing. The results show 5 neighborhoods in Toronto where a restaurant could be opened.