
Where to open a new fast food restaurant in Toronto?

Coursera Capstone Project

Introduction

I will be examining which boroughs are the best to open a new fast food restaurant in Toronto. I assume that areas with the lowest amount of (fast food) restaurants would be the best ones. This project might be interesting for anyone planning to open a new fast food restaurant, whether it's a chain (e. g. KFC) or a small business.

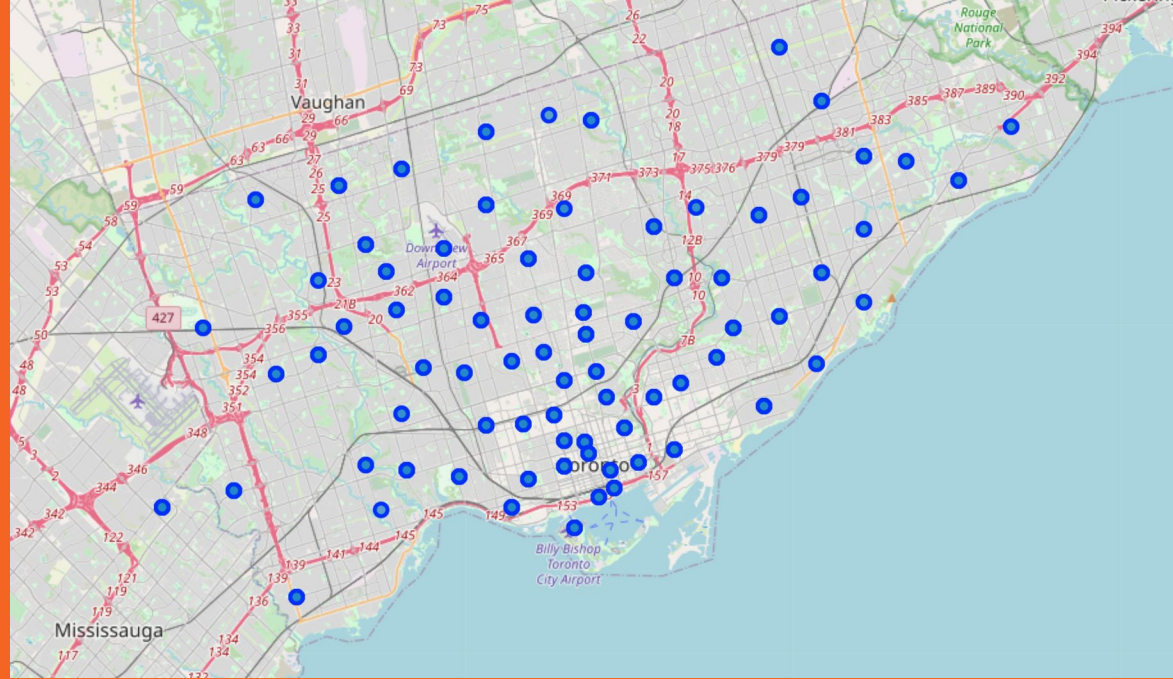
Data frame with geospatial data of Toronto

	Postal Code	Borough	Neighbourhood	Latitude	Longitude
0	M3A	North York	Parkwoods	43.753259	-79.329656
1	M4A	North York	Victoria Village	43.725882	-79.315572
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.718518	-79.464763
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494
5	M9A	Etobicoke	Islington Avenue, Humber Valley Village	43.667856	-79.532242
6	M1B	Scarborough	Malvern, Rouge	43.806686	-79.194353
7	M3B	North York	Don Mills	43.745906	-79.352188
8	M4B	East York	Parkview Hill, Woodbine Gardens	43.706397	-79.309937
9	M5B	Downtown Toronto	Garden District, Ryerson	43.657162	-79.378937
10	M6B	North York	Glencairn	43.709577	-79.445073

Methodology

I will start by creating a data frame containing a list of all boroughs and neighborhoods in Toronto, including their postal codes, latitude, and longitude. Then I will examine the number of fast food restaurants in each neighborhood using the Foursquare API. Using one hot encoding, I will generate a data frame that contains all neighborhoods and the number of venues located in them, according to the Foursquare venues categories. I will later drop all columns with neighborhoods who already have some fast food restaurants (around half of all Toronto neighborhoods). By visualizing the neighborhoods without fast food restaurants on a map, it becomes apparent that most of these neighborhoods are scattered around downtown Toronto. Using the Foursquare API again, I will generate a list of all restaurants located in the city center. By visualizing these restaurants on a map, I can see that most of them are centered around the same spot, while there are no restaurants in other parts of the Toronto city center. I suggest these parts of Toronto as an ideal location for a new fast food restaurant.

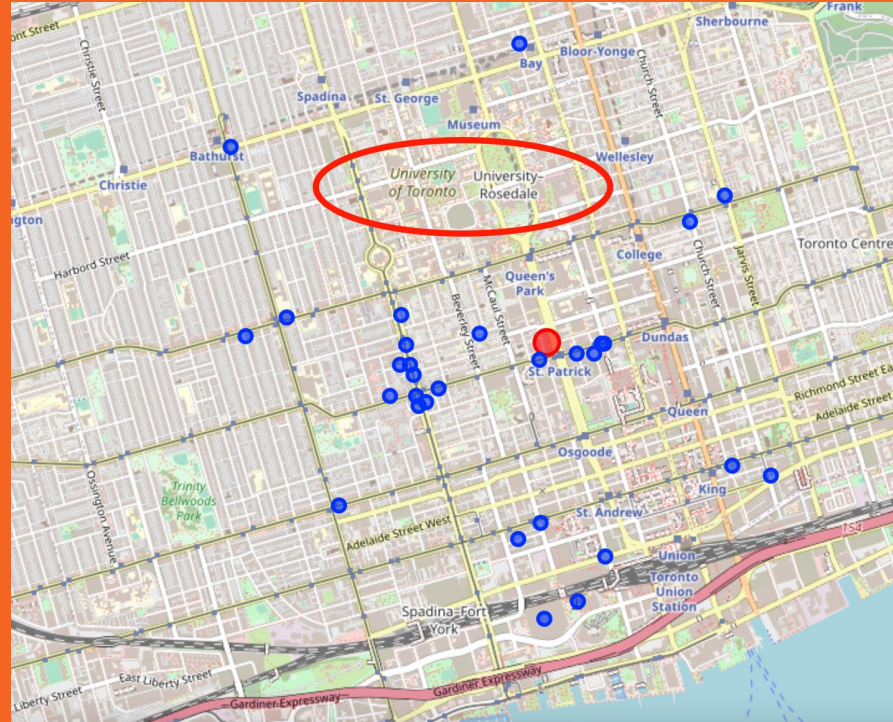
Map of neighborhoods with no fast food restaurants



Results

Using the methods outlined earlier, I suggest that the best place to open a new fast food restaurant in Toronto is in the city center around University-Rosedale, as there are no other restaurants in the area and no fast food restaurants even in the surrounding neighborhoods.

Restaurants in downtown Toronto, with an empty spot at University-Rosedale



Discussion

I noted that neighborhoods without any fast food restaurants are scattered all over Toronto, however, most of them are clustered around the city center, meaning that it is hard to find a fast food restaurant directly in the hearth of Toronto. In the area around University-Rosedale, there are even no restaurants at all, and I would therefore suggest opening a new fast food restaurant there, as it might easily get the attention of university students, tourists, and office employees.

Conclusion

This project's goal was to find out what is the best area in Toronto to open a new fast food restaurant. Based on my data analysis, I suggest that the best place is around University-Rosedale (close to the Queen's Park and Ontario Provincial Parliament).
