New Restaurant in Toronto

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Introduction

Background :

Client wishes to start a new restaurant in Canada , Toronto as part of the business plan

Need to find out a good location and type based on the existing data

Business problem :

1. Find out Few best locations so client can choose from
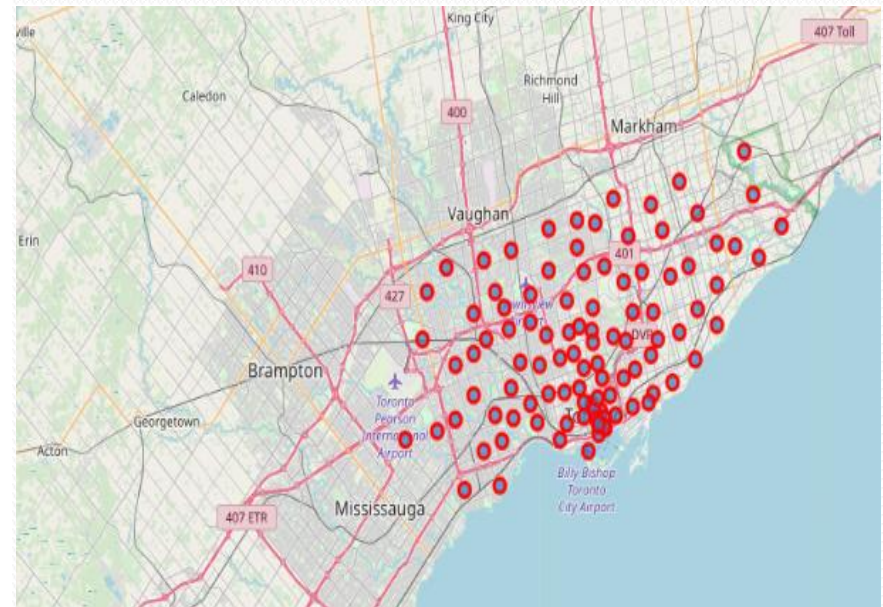2. Find out Best type of restaurant to start in that location

Data

Below data's are used for the analysis

➢ To get neighbourhood data in Toronto :
https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

➢ Geospatial data to get the latitude and longitude data:

 http://cocl.us/Geospatial_data

➢ To fetch the restaurants in Toronto :
Foursquare API

Methodology

- Clean the neighbourhood data to analyze further
- Plot the neighbourhood locations using folium

Methodology (cont..)

- Find the restaurants in Toronto using Four Square API

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	Indexes
1	Parkwoods	43.753259	-79.329656	KFC	43.754387	-79.333021	Fast Food Restaurant	10
5	Victoria Village	43.725882	-79.315572	Portugril	43.725819	-79.312785	Portuguese Restaurant	11
6	Victoria Village	43.725882	-79.315572	The Frig	43.727051	-79.317418	French Restaurant	7
15	Harbourfront, Regent Park	43.654260	-79.360636	Impact Kitchen	43.656369	-79.356980	Restaurant	-1
31	Harbourfront, Regent Park	43.654260	-79.360636	El Catrin	43.650601	-79.358920	Mexican Restaurant	8

- Clean and analyze the neighbourhood data and restaurant data to get best restaurant types and best locations in Toronto

Results and Analysis

- Neighbour hood locations with most number of restaurants

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	Indexes
13	Chinatown, Grange Park, Kensington Market	34	34	34	34	34	34	34
15	Church and Wellesley	30	30	30	30	30	30	30
0	Adelaide, King, Richmond	28	28	28	28	28	28	28
28	First Canadian Place, Underground city	27	27	27	27	27	27	27
19	Commerce Court, Victoria Hotel	27	27	27	27	27	27	27
12	Central Bay Street	25	25	25	25	25	25	25
55	St. James Town	25	25	25	25	25	25	25
54	Ryerson, Garden District	24	24	24	24	24	24	24
56	Stn A PO Boxes 25 The Esplanade	23	23	23	23	23	23	23
23	Design Exchange, Toronto Dominion Centre	22	22	22	22	22	22	22
44	Little Portugal, Trinity	20	20	20	20	20	20	20
60	The Danforth West, Riverdale	16	16	16	16	16	16	16
34	Harbourfront East, Toronto Islands, Union Station	14	14	14	14	14	14	14
65	Willowdale South	13	13	13	13	13	13	13
27	Fairview, Henry Farm, Oriole	11	11	11	11	11	11	11
5	Berczy Park	11	11	11	11	11	11	11

Results and Analysis

- Most popular restaurant types in Toronto

	Venue Category	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Indexes
43	Restaurant	59	59	59	59	59	59	59
28	Italian Restaurant	52	52	52	52	52	52	52
18	Fast Food Restaurant	38	38	38	38	38	38	38
29	Japanese Restaurant	35	35	35	35	35	35	35
1	American Restaurant	29	29	29	29	29	29	29
46	Sushi Restaurant	27	27	27	27	27	27	27
7	Chinese Restaurant	25	25	25	25	25	25	25
44	Seafood Restaurant	24	24	24	24	24	24	24
49	Thai Restaurant	21	21	21	21	21	21	21
52	Vegetarian / Vegan Restaurant	20	20	20	20	20	20	20
23	Greek Restaurant	17	17	17	17	17	17	17
35	Mexican Restaurant	16	16	16	16	16	16	16
26	Indian Restaurant	15	15	15	15	15	15	15
36	Middle Eastern Restaurant	14	14	14	14	14	14	14
2	Asian Restaurant	13	13	13	13	13	13	13
53	Vietnamese Restaurant	12	12	12	12	12	12	12
20	French Restaurant	12	12	12	12	12	12	12
6	Caribbean Restaurant	9	9	9	9	9	9	9

Inference

- An ideal place for restaurant should not be too crowded with existing restaurants: Minimise the competition

- The best type of restaurant should be the ones that is most popular in that area: Maximising the profit

Conclusions

- Best places to start a new restaurant

	Neighbourhood	No of restaurants
0	Harbourfront East, Toronto Islands, Union Station	14
1	Willowdale South	13
2	Fairview, Henry Farm, Oriole	11
3	Berczy Park	11

- Most popular Restaurant types in Toronto

	Type of restaurant	Count in Toronto
1	Italian Restaurant	52
2	Fast Food Restaurant	38
3	Japanese Restaurant	35
4	American Restaurant	29
5	Sushi Restaurant	27
6	Chinese Restaurant	25
7	Seafood Restaurant	24
8	Thai Restaurant	21
9	Vegetarian / Vegan Restaurant	20

Future Scope

- We can use this idea to find best cinema location or other type of places and to make recommendations.

- This algorithm can be extended to find out more tips and tricks that attracts people to restaurant, which can help our current client in future.

- We can also use this algorithm to suggest best restaurant locations all over the world if this is success.

- The feedback can be used to improve the algorithm and finding faults.

Thank you