

How similar are the restaurant markets of Manhattan and Toronto

February 18, 2020

Background

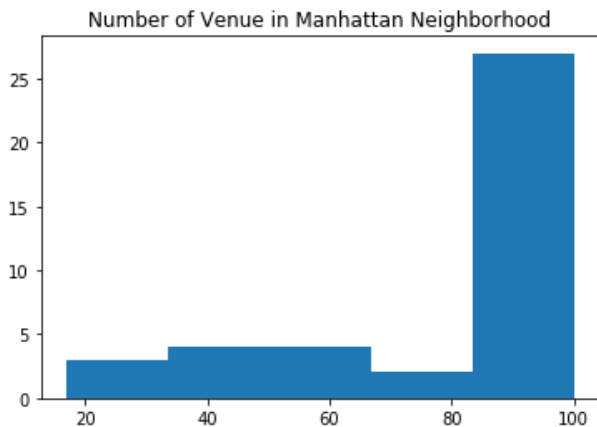
- The market of Toronto is expanding as the population of Toronto growing.
- It is compelling to expand your business to Toronto.
- If you decide to enter Toronto market, it is important to decide which neighborhood to enter.
- It is a rational to enter a market that is similar to the market you are at now to reduce the risk.

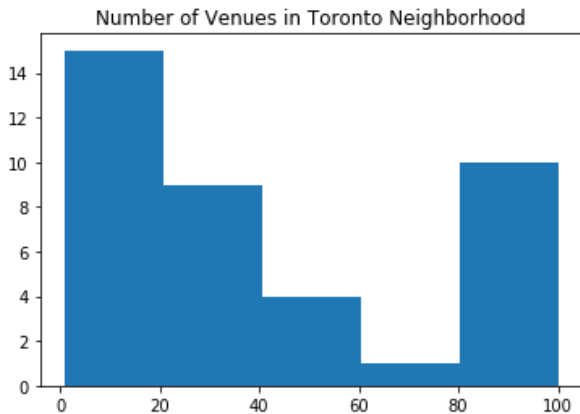
Problem

- The problem is to find the correct market (neighborhood) to open a new restaurant.
- A restaurant that is successful in Manhattan might be more likely to be successful in Toronto if the new franchise is in a neighborhood that is similar to the old one.
- So, we would like to group neighborhoods in Manhattan and Toronto together so that neighborhoods in the same group are similar.

- Obvious, people in the restaurant industry who plans to expand their business from Manhattan to Toronto, or from Toronto to Manhattan, would be interested.

- Data of Venus in Manhattan and Toronto is from Foursquare.
- The neighborhood location data for Manhattan is downloaded from https://cocl.us/new_york_dataset.
- The neighborhood location data for Toronto is scrapped from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada_M.





- I use k-means clustering trying to group neighborhood together.
- I set the number of cluster to 10 so that I could group all the neighbourhoods in a finer way.

Result

	Neighborhood	Borough	Cluster
0	Battery Park City	Manhattan	2
1	Carnegie Hill	Manhattan	2
2	Central Harlem	Manhattan	2
3	Chelsea	Manhattan	2
4	Chinatown	Manhattan	2
5	Civic Center	Manhattan	2
6	Clinton	Manhattan	2
8	East Village	Manhattan	2
10	Flatiron	Manhattan	2
11	Gramercy	Manhattan	2
12	Greenwich Village	Manhattan	2
14	Hudson Yards	Manhattan	2
16	Lenox Hill	Manhattan	2
17	Lincoln Square	Manhattan	2
18	Little Italy	Manhattan	2
19	Lower East Side	Manhattan	2

Result

39	Yorkville	Manhattan	2
40	Adelaide, King, Richmond	Toronto	2
43	Business Reply Mail Processing Centre 969 Eastern	Toronto	2
45	Cabbagetown, St. James Town	Toronto	2
47	Chinatown, Grange Park, Kensington Market	Toronto	2
55	Dovercourt Village, Dufferin	Toronto	2
61	High Park, The Junction South	Toronto	2
63	Little Portugal, Trinity	Toronto	2
66	Parkdale, Roncesvalles	Toronto	2
70	Runnymede, Swansea	Toronto	2
71	Ryerson, Garden District	Toronto	2
74	Studio District	Toronto	2
77	The Beaches West, India Bazaar	Toronto	2
78	The Danforth West, Riverdale	Toronto	2

Result

	Neighborhood	Borough	Cluster
7	East Harlem	Manhattan	9
13	Hamilton Heights	Manhattan	9
15	Inwood	Manhattan	9
21	Manhattanville	Manhattan	9
22	Marble Hill	Manhattan	9
25	Morningside Heights	Manhattan	9
28	Roosevelt Island	Manhattan	9
33	Tudor City	Manhattan	9
51	Davisville	Toronto	9
75	The Annex, North Midtown, Yorkville	Toronto	9

Result

	Neighborhood	Borough	Cluster
9	Financial District	Manhattan	8
41	Berczy Park	Toronto	8
46	Central Bay Street	Toronto	8
49	Church and Wellesley	Toronto	8
50	Commerce Court, Victoria Hotel	Toronto	8
53	Deer Park, Forest Hill SE, Rathnelly, South Hi...	Toronto	8
54	Design Exchange, Toronto Dominion Centre	Toronto	8
56	First Canadian Place, Underground city	Toronto	8
59	Harbourfront	Toronto	8
60	Harbourfront East, Toronto Islands, Union Station	Toronto	8
65	North Toronto West	Toronto	8
67	Queen's Park	Toronto	8
72	St. James Town	Toronto	8
73	Stn A PO Boxes 25 The Esplanade	Toronto	8

- Restaurant managers should consider entering the neighborhood that is in the same cluster because the market condition of markets in the same cluster are closer. Because it is more likely to be successful.