

# Toronto's Venues by Neighborhood

## Introduction

To open a new business it's very important to analyze the location. One of the important factors to consider is the amount of similar businesses in the prospect areas. This report will classify venues into categories and analyze the amount of venues per neighbourhood.

## Data

Data used for this report is composed of geographic data of Toronto and venue's data from Foursquare.

Once data is cleaned and grouped from Wikipedia, the following table is obtained:

	Postal Code	Borough	Neighbourhood
2	M3A	North York	Parkwoods
3	M4A	North York	Victoria Village
4	M5A	Downtown Toronto	Regent Park, Harbourfront
5	M6A	North York	Lawrence Manor, Lawrence Heights
6	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government
...	...	...	...
160	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North
165	M4Y	Downtown Toronto	Church and Wellesley
168	M7Y	East Toronto	Business reply mail Processing Centre, South C...
169	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...
178	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...

Table is then merged with coordinates data:

	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
...	...	...	...	...	...
98	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North	43.653654	-79.506944
99	M4Y	Downtown Toronto	Church and Wellesley	43.665860	-79.383160
100	M7Y	East Toronto	Business reply mail Processing Centre, South C...	43.662744	-79.321558
101	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...	43.636258	-79.498509
102	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...	43.628841	-79.520999

## Methodology

Using Foursquare's API information about the following information about the venues is obtained:

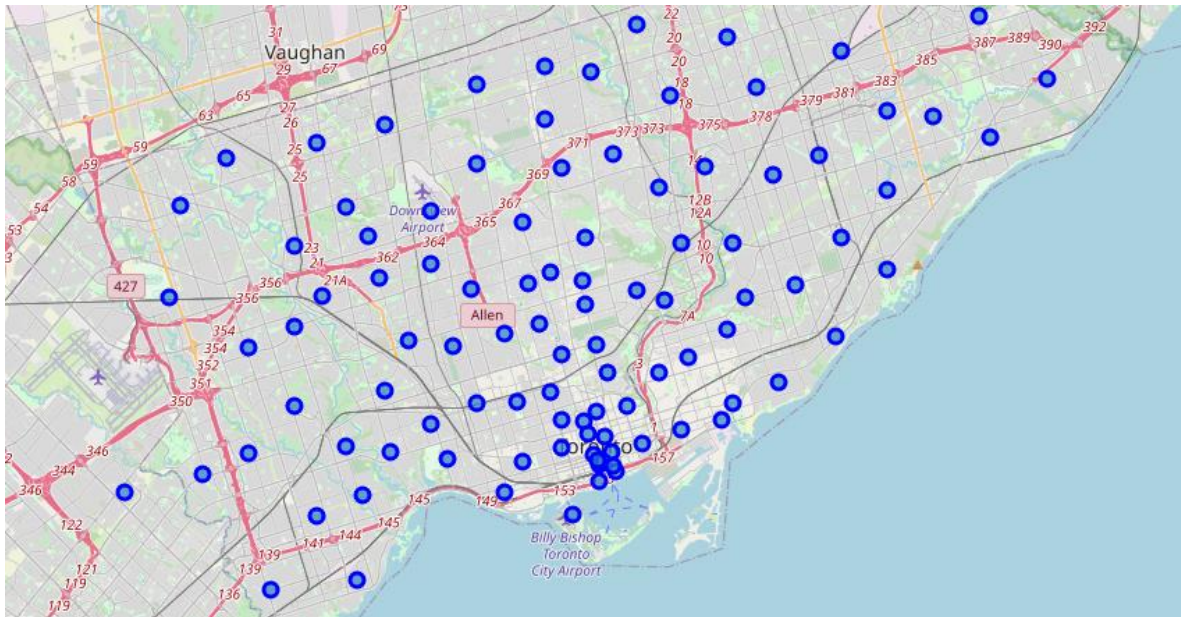
	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Parkwoods	43.753259	-79.329656	Brookbanks Park	43.751976	-79.332140	Park
1	Parkwoods	43.753259	-79.329656	Variety Store	43.751974	-79.333114	Food & Drink Shop
2	Victoria Village	43.725882	-79.315572	Victoria Village Arena	43.723481	-79.315635	Hockey Arena
3	Victoria Village	43.725882	-79.315572	Tim Hortons	43.725517	-79.313103	Coffee Shop
4	Victoria Village	43.725882	-79.315572	Portugril	43.725819	-79.312785	Portuguese Restaurant

It is then encoded into dummies, transposed and grouped by sum to obtain the amount of different venues by neighbourhood:

Neighborhood	Venue	Agincourt	Alderwood, Long Branch	Bathurst Manor, Wilson Heights, Downsview North	Bayview Village	Bedford Park, Lawrence Manor East	Berczy Park	Birch Cliff, Cliffside West	Brockton, Parkdale Village, Exhibition Place	Business reply mail Processing Centre, South Central Letter Processing Plant Toronto	CN Tower, King and Spadina, Railway Lands, Harbourfront West, Bathurst Quay, South Niagara Island airport	Caledonia-Fairbanks	Canada Post Gateway Processing Centre	Cedarbrae	Central Bay Street
0	Yoga Studio	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1	Accessories Store	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Airport	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	Airport Food Court	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4	Airport Gate	0	0	0	0	0	0	0	0	0	1	0	0	0	0

## Results

Once the data is analyzed, for each type of venue the most popular neighbourhoods are returned:



----Coffee Shop----

	venue	count
0	Queen's Park, Ontario Provincial Government	8
1	Central Bay Street	7
2	Regent Park, Harbourfront	6
3	Toronto Dominion Centre, Design Exchange	5
4	Fairview, Henry Farm, Oriole	4

	Venue	1st Most Common Neighborhood	2nd Most Common Neighborhood	3rd Most Common Neighborhood	4th Most Common Neighborhood	5th Most Common Neighborhood	6th Most Common Neighborhood	7th Most Common Neighborhood	8th Most Common Neighborhood	9th Most Common Neighborhood	10th Most Common Neighborhood
234	Vietnamese Restaurant	Kensington Market, Chinatown, Grange Park	Little Portugal, Trinity	Lawrence Manor, Lawrence Heights	Willowdale, Willowdale East	Summerhill West, Rathnelly, South Hill, Forest...	Dorset Park, Wexford Heights, Scarborough Town...	York Mills, Silver Hills	Glencairn	Dufferin, Dovercourt Village	East Toronto, Broadview North (Old East York)
235	Warehouse Store	Thornclyffe Park	York Mills, Silver Hills	Dorset Park, Wexford Heights, Scarborough Town...	Dufferin, Dovercourt Village	East Toronto, Broadview North (Old East York)	Eringate, Bloordale Gardens, Old Burnhamthorpe...	Fairview, Henry Farm, Oriole	First Canadian Place, Underground city	Forest Hill North & West, Forest Hill Road Park	Garden District, Ryerson
236	Wine Bar	Little Portugal, Trinity	Kensington Market, Chinatown, Grange Park	Guildwood, Morningside, West Hill	Dufferin, Dovercourt Village	East Toronto, Broadview North (Old East York)	Eringate, Bloordale Gardens, Old Burnhamthorpe...	Fairview, Henry Farm, Oriole	First Canadian Place, Underground city	Forest Hill North & West, Forest Hill Road Park	Garden District, Ryerson
237	Wings Joint	Mimico NW, The Queensway West, South of Bloor,...	York Mills, Silver Hills	Guildwood, Morningside, West Hill	Dufferin, Dovercourt Village	East Toronto, Broadview North (Old East York)	Eringate, Bloordale Gardens, Old Burnhamthorpe...	Fairview, Henry Farm, Oriole	First Canadian Place, Underground city	Forest Hill North & West, Forest Hill Road Park	Garden District, Ryerson
238	Women's Store	Lawrence Manor, Lawrence Heights	Caledonia-Fairbanks	York Mills, Silver Hills	Harbourfront East, Union Station, Toronto Islands	East Toronto, Broadview North (Old East York)	Eringate, Bloordale Gardens, Old Burnhamthorpe...	Fairview, Henry Farm, Oriole	First Canadian Place, Underground city	Forest Hill North & West, Forest Hill Road Park	Garden District, Ryerson

## Discussion

With the above information it's easy to check the amount of venues per neighbourhood. One just needs to find the type of venue he is interested in and you can see the neighbourhoods where those types of venues are popular. It could be a good strategy to locate a business in an area which is already considered an area where those type of venues are popular or good, but it could also be a good strategy to open the business in a neighbourhood where there aren't yet any venues like that.

## Conclusion

From the results section we can see that the amount of venues per neighbourhood is pretty small. In order to get more reliable insights more information on the venues would be needed, and it would help a lot if the ratings of these venues were included.