



SEPTEMBER 2, 2018

THE BATTLE OF NEIGHBORHOODS REPORT

COURSERA – CAPSTONE PROJECT

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BUSINESS PROBLEM

EXECUTIVE SUMMARY

There are many existing venues in neighborhoods in New York as well as Toronto city. How can we know which venue by category and city have the most interesting from people as we as have the most number of users checked-in? Then how can we know the competition of the venues of the same category in a city or between neighborhoods in a city bases on the statistic number of users, visits, checked-ins, likes, rating?

Through by answering this questions, we can have insight about the competition between venues of the same category in a city or in a neighborhood, then we can find out the reasons could make these venues to be attractive to the people.

Finally, after we know reasons and have the accurate statistic data about the existing competitors, the behavior of users, the user culture, the demands are not served or are not served well, the needs in future, we will develop strategies for changes in the market, sustainable growth as well as expansion business to new market.

DATA - STATISTICS & REPORTS

The data used in these statistics and reports was resources retrieved from:

- Toronto data: Wikipedia (Toronto postal code) combined with neighborhoods, venues data by using Foursquare APIs.
- New York data: included neighborhoods, venues data gathered from <https://ibm.box.com/shared/static/fbpwbovar7lf8p5sgddm06cgipa2rxpe.json>

Before using Foursquare APIs to get neighborhoods, venues data, I used Geocoder library to get coordinates (latitude, longitude) for each neighborhood, instead of Google Geoencoding APIs.

Then I combined 2 data frames Toronto and New York together in order to perform comparison, statistic and create reports.

TOP 20 VENUES RECOMMENDED BY CATEGORY IN CITY, NEIGHBORHOODS

TABLE 1 TOP 20 CATEGORIES HAS THE MOST VENUES IN NEW YORK, TORONTO

	New York	Toronto	Total
Pizza Place	434.0	49.0	483.0
Coffee Shop	264.0	198.0	462.0
Italian Restaurant	322.0	48.0	370.0
Deli / Bodega	274.0	18.0	292.0
Bakery	231.0	48.0	279.0
Café	164.0	103.0	267.0
Bar	223.0	41.0	264.0
Chinese Restaurant	204.0	25.0	229.0
Sandwich Place	186.0	41.0	227.0
Park	171.0	45.0	216.0
American Restaurant	176.0	31.0	207.0
Grocery Store	179.0	24.0	203.0
Mexican Restaurant	170.0	19.0	189.0
Pharmacy	169.0	18.0	187.0
Donut Shop	168.0	2.0	170.0
Gym / Fitness Center	144.0	21.0	165.0
Ice Cream Shop	141.0	20.0	161.0
Restaurant	87.0	61.0	148.0
Sushi Restaurant	113.0	30.0	143.0
Hotel	96.0	45.0	141.0

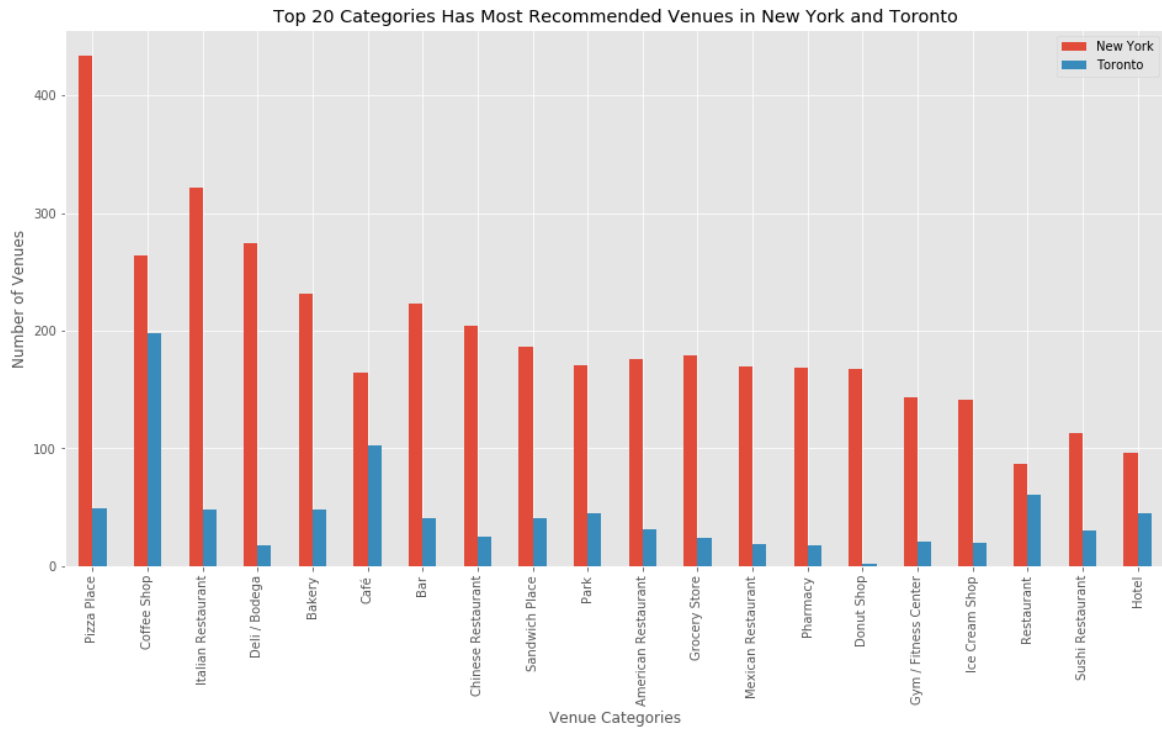
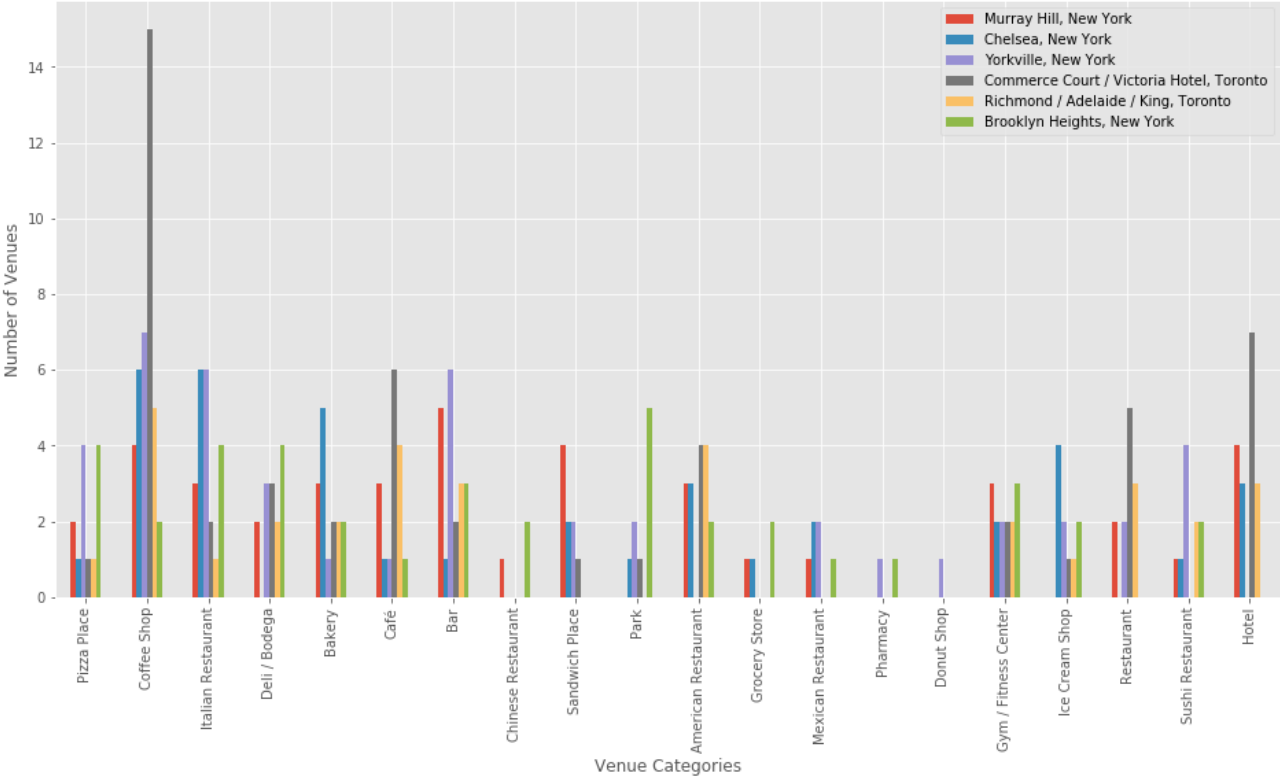


TABLE 2 TOP 20 CATEGORIES HAVE THE MOST VENUES IN 6 NEIGHBORHOODS

	Murray Hill, New York	Chelsea, New York	Yorkville, New York	Commerce Court / Victoria Hotel, Toronto	Richmond / Adelaide / King, Toronto	Brooklyn Heights, New York	Total
Pizza Place	2	1	4	1	1	4	483
Coffee Shop	4	6	7	15	5	2	462
Italian Restaurant	3	6	6	2	1	4	370
Deli / Bodega	2	0	3	3	2	4	292
Bakery	3	5	1	2	2	2	279
Café	3	1	1	6	4	1	267
Bar	5	1	6	2	3	3	264
Chinese Restaurant	1	0	0	0	0	2	229
Sandwich Place	4	2	2	1	0	0	227
Park	0	1	2	1	0	5	216
American Restaurant	3	3	0	4	4	2	207
Grocery Store	1	1	0	0	0	2	203
Mexican Restaurant	1	2	2	0	0	1	189
Pharmacy	0	0	1	0	0	1	187
Donut Shop	0	0	1	0	0	0	170
Gym / Fitness Center	3	2	2	2	2	3	165
Ice Cream Shop	0	4	2	1	1	2	161
Restaurant	2	0	2	5	3	0	148
Sushi Restaurant	1	1	4	0	2	2	143
Hotel	4	3	0	7	3	0	141

Top 20 Categories Has Most Recommended Venues Of Top 6 Neighborhoods



TOP 5 VENUES HAVE THE MOST INTERESTING (LIKES) BY CATEGORY IN CITY, NEIGHBORHOODS

From above data, I will use FOURSQUARE API get detail information of venues such as likes, rating, the number of users, etc...

TOP 5 VENUES HAVE THE HIGHEST RATING BY CATEGORY IN CITY, NEIGHBORHOODS

TOP 5 VENUES HAVE THE MOST VISITS, USERS BY CATEGORY IN CITY, NEIGHBORHOODS

TOP 10 CATEGORIES HAVE THE MOST VISITS, USERS BY CITY, NEIGHBORHOODS
