

Battle of the Neighborhoods Final Report

Jasmine Li

1. Introduction

For the capstone project of Applied Data Science, we are asked to define and solve a real-world problem independently. Objectives of the final assignments are to define a business problem, look for data in the web and, use Foursquare location data to compare different districts within Toronto to figure out which one is suitable for starting an entrepreneurship. As prepared for the assignment, I go through the problem designing, data preparation and final analysis section step by step. Detailed codes and images are given in Github and link can be found at the end of the post.

The idea of this study is to help people planning to open a new restaurant in Toronto to choose the right location by providing data about the income and population of each neighborhood as well as the competitors already present on the same regions.

2. Data Preparation

To provide the stakeholders the necessary information I'll be combining Toronto's 2016 Census that contains Population, Average income per Neighborhood with Foursquare API to collect competitors on the same neighborhoods.

Toronto's Census data is publicly available at this website:

<https://www.toronto.ca/city-government/data-research-maps/open-data/open-data-catalogue/#8c732154-5012-9afe-d0cd-ba3ffc813d5a>

A partial view of the dataset is presented as following:

	Category	Topic	Data Source	Characteristic	City of Toronto	Agincourt North	Agincourt South-Malvern West	Alderwood	Annex	Ban Dor
0	Neighbourhood Information	Neighbourhood Information	City of Toronto	Neighbourhood Number	NaN	129	128	20	95	42
1	Neighbourhood Information	Neighbourhood Information	City of Toronto	TSNS2020 Designation	NaN	No Designation	No Designation	No Designation	No Designation	No Des
2	Population	Population and dwellings	Census Profile 98-316-X2016001	Population, 2016	2,731,571	29,113	23,757	12,054	30,526	27,6
3	Population	Population and dwellings	Census Profile 98-316-X2016001	Population, 2011	2,615,060	30,279	21,988	11,904	29,177	26,9
4	Population	Population and dwellings	Census Profile 98-316-X2016001	Population Change 2011-2016	4.50%	-3.90%	8.00%	1.30%	4.60%	2.90

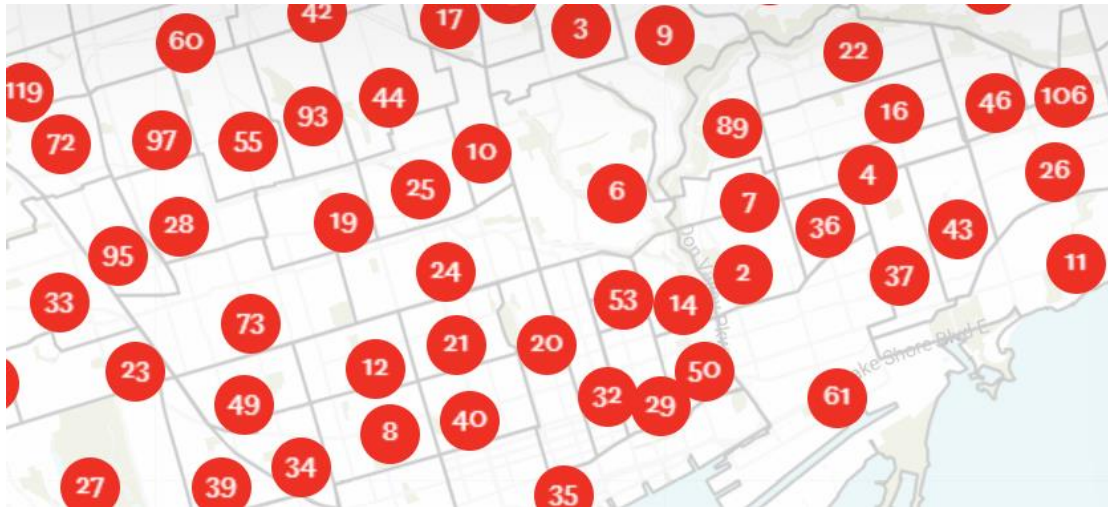
3. Data Analysis

First and foremost, we have to conduct data cleaning in order to retrieve the information that we actually need before data analysis. In this project, the focus is on the population and income of the district which are both crucial factors of deciding which location is the optimal choice to start a restaurant.

A partial view of the cleaned dataset is presented as following:

	Population_2016	Income_2016
St.Andrew-Windfields	17,812	100,516
Edenbridge-Humber Valley	15,535	101,551
Lawrence Park North	14,607	111,730
Annex	30,526	112,766
Yonge-St.Clair	12,528	114,174
Bedford Park-Nortown	23,236	123,077
Leaside-Bennington	16,828	125,564
Kingsway South	9,271	144,642
Casa Loma	10,968	165,047
Lawrence Park South	15,179	169,203
Forest Hill South	10,732	204,521
Rosedale-Moore Park	20,923	207,903
Black Creek	21,737	25,989
Mount Olive-Silverstone-Jamestown	32,954	26,548
Oakridge	13,845	26,793
Glenfield-Jane Heights	30,491	27,984
Milliken	26,572	28,085
Flemingdon Park	21,933	28,654

Here is a hot spot map for all the districts in Toronto:



4. Results and Conclusion

Based on data analysis, these are the best choices to start a new restaurant in Toronto:

Yonge and Eglinton

Yonge and Eglinton can be called midtown Toronto, but really its on the upper half of midtown. This area has undergone a development boom in the last couple years but even before that, it was a popular place in the city. Iconic bars including the Duke of Kent and Rose and Crown line the streets here, along with pretty much everything else you would need. Medical offices, grocery stores, bars, subway, and great restaurants. It's ideal for people who want the feel of downtown without being right in the thick of it. Lots of apartment buildings and condos and its uptown location make this one of the more affordable places to live in Toronto. It's less than a twenty minutes ride to Dundas station and less than twenty minutes to get to the burbs in the other direction.

The Annex

The Annex is a very student heavy neighborhood but don't let that scare you off. That just means you have a lot of cheap food options around you, bars with great drink specials, and you're downtown! The houses in the neighborhood are beautiful and a lot of them are frats and sororities from nearby UFT so if you're the kind person that misses the Greek scene from unit, The Annex is for you.

Kensington Market

Kensington Market may just be my favorite neighborhood in Toronto. Yes you have to take a street car if you don't like to walk but it is so worth it. The houses are unique and gorgeous, it has some of the best food in the city, the community is full of quirky personality, and China town is right there to meet all of your shopping needs. Not enough people appreciate the kind of shopping you can do in China town. The prices are cheap and you can get all kinds of groceries. Also, dumplings, delicious dumplings on every corner. The business in the market features quaint cafes, little fruit and veg markets, amazing ethnic food, and vintage hippie shops. Kensington is just a dream come true in Toronto. A good way to gauge if Kensington is right for you is one simple question, do you like incense? If yes Kensington will probably make you very happy.

Queen St. West

Queen St. West is one of the most fun streets to walk down. You can plan to do some of the best shopping in the city, drink at some of the most popular bars, and eat some great food all while walking along this one street. It is one of, if not the coolest neighborhood in Toronto. There are stores to meet every fashion style from super chic to punk. Definitely one of the busiest neighborhoods in Toronto with a whole lot to offer in the way of excitement.