

An aerial, high-angle photograph of a city street intersection, likely in Toronto. The image shows a dense grid of tall, multi-story buildings with many windows. The streets are filled with cars and some larger vehicles, creating a sense of a busy urban environment. The lighting is somewhat dim, giving the image a moody, dark appearance. The text is overlaid on this background.

Relocating to Toronto: Where to live?

XYZ Consulting Agency

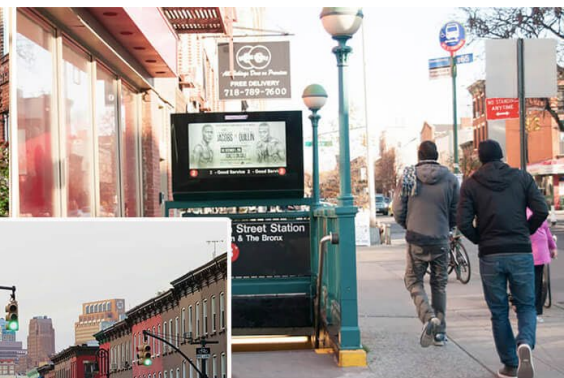
Problem Statement

Our client is looking to move from Brooklyn, NY to Toronto. We are assisting the family in identifying the best fitting Toronto borough for their lifestyle and needs.



Brooklyn to ...

In recent years, Brooklyn has become the coolest borough of New York City with its vibrant mix of music festivals, big art and foodie scene, and trendy bars.



Where in Toronto?

Our firm has examined the boroughs of Toronto based on the existence of types of venues.



The report details the data sources and processes followed, findings and our recommendations to the client regarding the most suitable boroughs of Toronto to relocate.

Data Acquisition and Analyses

In order to assist our client in the process, we utilized the following data sets and Foursquare API.

- ✓ New York City Neighborhood Names data set from the NYU Spatial Data Repository (https://geo.nyu.edu/catalog/nyu_2451_34572)
- ✓ List of postal codes of Canada: M content from Wikipedia showing postal codes of Toronto (https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M)

The NYC dataset includes zipcodes of NYC boroughs and associated latitudes and longitudes. The dataset was downloaded as a csv file.

Through Foursquare API, the most common venues of Brooklyn was identified.

Following the development of more concrete information on Brooklyn, Toronto dataset was examined to determine areas that resemble Brooklyn the most.

NYC Data

The dataset on NYC included 300 rows and 4 columns. In other words, there are 300 unique zip codes in the NYC from 5 boroughs. In addition to the zip codes, the dataset included names of the boroughs, latitude and longitude.

Zipcode	Borough	Latitude	Longitude
11201	Brooklyn	40.6940	-73.9903
11004	Queens	40.7481	-73.7114
10301	Staten Island	40.6316	-74.0927
10451	Bronx	40.8222	-73.9217
10001	Manhattan	40.7484	-73.9967

A new data frame is created for the Brooklyn data including 37 unique zip codes. Through Foursquare API, venues in Brooklyn were captured and appended to the data based on the zip codes.

Brooklyn Venues via FourSquare API

Within the 37 zipcodes falling within Brooklyn, 1567 venues are identified.

The first five venues listed are SoulCycle Brooklyn Heights, Heatwise, Center for Brooklyn History, Xtend Barre Brooklyn Heights, and Perelandra Natural Foods which are representing five different categories of venues.

Borough	Latitude	Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Brooklyn	40.694	-73.9903	SoulCycle Brooklyn Heights	40.692253	-73.991042	Cycle Studio
Brooklyn	40.694	-73.9903	Heatwise	40.693450	-73.991788	Yoga Studio
Brooklyn	40.694	-73.9903	Center for Brooklyn History	40.694942	-73.992333	History Museum
Brooklyn	40.694	-73.9903	Xtend Barre Brooklyn Heights	40.693599	-73.992376	Gym / Fitness Center
Brooklyn	40.694	-73.9903	Perelandra Natural Foods	40.693380	-73.991341	Grocery Store

Top 10 Most Common Venue Types

Venue Category	Number of Venues
Pizza Place	85
Bar	59
Bakery	59
Coffee Shop	56
Chinese Restaurant	46
Deli / Bodega	44
Mexican Restaurant	42
Italian Restaurant	38
Café	33
Bank	32

The most common venues in Brooklyn are pizza places followed by bars, bakeries, and coffee shops.

It is important to highlight the prevalence of food and beverage establishments in the area. Nine of the 10 most common venue categories fall into food and beverage category.

In addition, the area offers plenty of cafes and coffee shops along with bakeries to fulfill the pre-work breakfast run in the morning or for the afternoon coffee hangout.

Moreover, restaurants offer variety of ethnic flavors along with pizza and deli carry out and American food.

Toronto Data

The Toronto dataset included 103 rows and 3 columns. In other words, there are 103 unique zip codes in Toronto from 14 boroughs. In addition to the zip codes, the dataset included names of the boroughs and neighborhoods. Latitudes and longitudes are appended to the data to create the data frame with 5 columns below.

Postal Code	Borough	Neighborhood	Latitude	Longitude
M3A	North York	Parkwoods	43.753259	-79.329656
M4A	North York	Victoria Village	43.725882	-79.315572
M5A	Downtown Toronto	Regent Park	43.654260	-79.360636
M6A	North York	Lawrence Manor	43.718518	-79.464763
M7A	Queen's Park	Ontario Provincial Government	43.662301	-79.389494

(Note: only top five rows are displayed)

Toronto Venues via FourSquare API

Through Foursquare API, venues in Toronto were captured and appended to the data based on the postal codes. Within the 103 zip codes falling within all boroughs of Toronto, 2130 venues are identified.

Borough	Borough Latitude	Borough Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
North York	43.753259	-79.329656	Brookbanks Park	43.751976	-79.332140	Park
North York	43.753259	-79.329656	KFC	43.754387	-79.333021	Fast Food Restaurant
North York	43.753259	-79.329656	Variety Store	43.751974	-79.333114	Food & Drink Shop
North York	43.725882	-79.315572	Victoria Village Arena	43.723481	-79.315635	Hockey Arena
North York	43.725882	-79.315572	Portugril	43.725819	-79.312785	Portuguese Restaurant

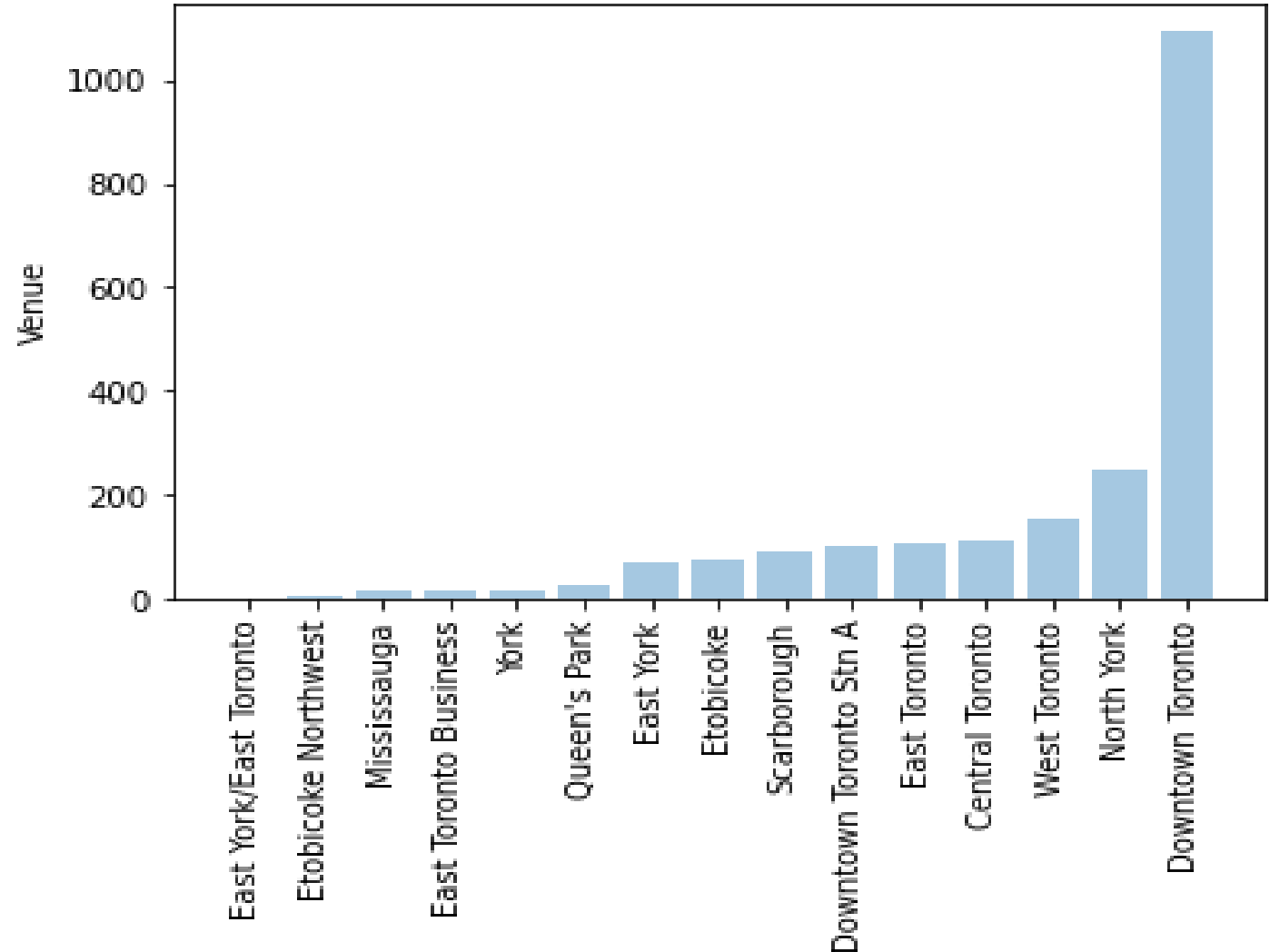
(Note: only top five rows are displayed)

Toronto Venues by Boroughs

Downtown Toronto hosts more than 1000 of the total of 2130 venues in Toronto. North York, West Toronto and Central Toronto are the other boroughs with many venues although these areas host substantially less venues comparing to the downtown area.

Solely based on the number of venues available, downtown Toronto appears to be a suitable area. However, we miss the very key information; *the type of venues available in these boroughs* which will be essential in our client's decision making.

Data was grouped by boroughs to identify venues at each borough.



Top 10 Most Common Venue Types by Borough

Borough	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
Central Toronto	Sandwich Place	Coffee Shop	Park	Café	Pizza Place	Sushi Restaurant	Restaurant	Clothing Store	Dessert Shop	Diner
Downtown Toronto	Coffee Shop	Café	Hotel	Restaurant	Japanese Restaurant	Italian Restaurant	Park	Bakery	Pizza Place	Clothing Store
Downtown Toronto Stn A	Coffee Shop	Cocktail Bar	Seafood Restaurant	Japanese Restaurant	Restaurant	Café	Beer Bar	Hotel	Bakery	Italian Restaurant
East Toronto	Greek Restaurant	Coffee Shop	Italian Restaurant	Brewery	Ice Cream Shop	American Restaurant	Pizza Place	Pub	Café	Bakery
East Toronto Business	Yoga Studio	Pizza Place	Smoke Shop	Skate Park	Brewery	Burrito Place	Restaurant	Recording Studio	Park	Auto Workshop
East York	Coffee Shop	Bank	Sandwich Place	Pizza Place	Sporting Goods Shop	Burger Joint	Pharmacy	Beer Store	Athletics & Sports	Supermarket
East York/East Toronto	Park	Convenience Store	Yoga Studio	Eastern European Restaurant	Distribution Center	Dog Run	Doner Restaurant	Donut Shop	Drugstore	Dumpling Restaurant

The table shows the top 10 most common venue categories for the 7 boroughs of Toronto. This information is key in identifying the boroughs most suitable for our client's relocation.

Top 10 Most Common Venue Types by Borough

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Etobicoke	Pizza Place	Sandwich Place	Coffee Shop	Pharmacy	Café	Bakery	Grocery Store	Gym	Park	Fast Food Restaurant
Etobicoke Northwest	Garden Center	Drugstore	Rental Car Location	Bar	Truck Stop	Discount Store	Distribution Center	Dog Run	Doner Restaurant	Donut Shop
Mississauga	Coffee Shop	Hotel	Intersection	Middle Eastern Restaurant	Burrito Place	Sandwich Place	Fried Chicken Joint	Gas Station	American Restaurant	Mediterranean Restaurant
North York	Coffee Shop	Clothing Store	Grocery Store	Restaurant	Fast Food Restaurant	Park	Pizza Place	Bank	Japanese Restaurant	Shopping Mall
Queen's Park	Coffee Shop	Sushi Restaurant	Bar	Beer Bar	Spa	Smoothie Shop	Sandwich Place	Burrito Place	Salad Place	Café
Scarborough	Fast Food Restaurant	Intersection	Coffee Shop	Bank	Bakery	Chinese Restaurant	Indian Restaurant	Breakfast Spot	Pizza Place	Playground
West Toronto	Café	Bar	Coffee Shop	Italian Restaurant	Restaurant	Bakery	Breakfast Spot	Pizza Place	Vegetarian / Vegan Restaurant	Grocery Store
York	Park	Convenience Store	Trail	Pool	Discount Store	Sandwich Place	Bus Line	Brewery	Fast Food Restaurant	Fried Chicken Joint

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Conclusion: Where to locate in Toronto?

Based on the composition of venues available in Brooklyn, for our client, the most suitable boroughs to move are East Toronto, West Toronto, and Downtown Toronto Stn A. These boroughs of Toronto offer similar food and beverage establishments to our client and their family.

East Toronto	West Toronto	Downtown Toronto STNA
3 restaurants 1 pizza joint 3 cafes/bakeries 2 pubs	3 restaurants 1 pizza joint 3 cafes/bakeries 1 bar 1 breakfast spot	4 restaurants 3 cafes/bakeries 2 bars

In all these areas, variety of food and beverage establishments are available. As sought by our client, cafes, breakfast spots, variety of restaurants and bars are available to provide a seamless relocation and to help them feel home.

Recommendation: Is East York your new home?



Let us know how we can help with your relocation needs!