Toronto Cafe Opening

Introduction/Business Problem

In Toronto a well known worldwide firm of cafes is looking to open a cafe. The kind of investigation they need is to select a neighbourhood that has not many cafes, but instead has a lot of other venues, like museums, universities, restaurants etc.

Toronto is the capital city of the Canadian province of Ontario. With a recorded population of 2,731,571 in 2016, it is the most populous city in Canada and the fourth most populous city in North America.

The demographics of Toronto, Ontario, Canada make Toronto one of the most multicultural and multiracial cities in the world. Toronto also has established ethnic neighbourhoods, which celebrate the city's multiculturalism.

A cafe is a place where people meet either for business or for socializing. The time spent in a cafe is quite often combined to another activity, like a visit to a museum, an educational activity or a business obligation. For this reason a cafe opening is considered to possess high probability of being successful, when the surrounding area includes several other places, like malls, business centres, restaurants, museums etc. Moreover as the firm is a well known coffee firm being competitive regarding the quality and not the prices solely, it is considered beneficial to select areas where not a lot of other cafes exist. It is understood that in places where people mostly go, there possibly exist more cafes. However a combination of high populated areas with other kind of venues, but not so many cafes is considered as an opportunity.

Data section

The idea is to investigate the neighbourhoods of Toronto and to sort them according to the desired ratio of number of venues/number of cafes.

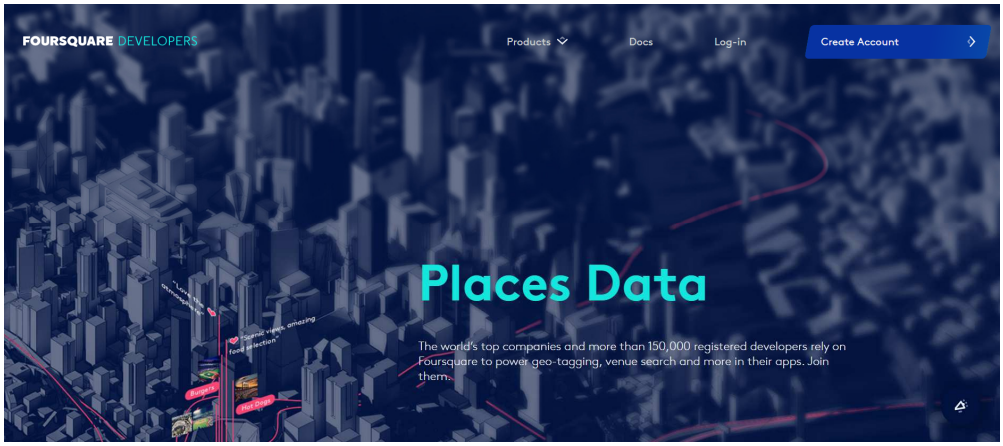
The neighbourhood with the highest ratio will be the candidate neighbourhood. This is a simple, but effective approach. The model can be further enriched to include demographic data and rental costs.

The neighbourhoods of Toronto will be first listed based on the potal code.

The list has been retrieved from wikipedia

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

For the venues investigation the Foursquare database is going to be utilized by its respective API. The queried venues will include every kind of venue. The cafes will be treated separately.



Social, and specifically, location-based services that use social platforms, represent a huge growth area for web and mobile developers. Most of these services use some kind of

RESTful service you can use to request JavaScript Serialized Object Notation (JSON) or XML data.
Foursquare is a social location service that allows users to explore the world around them. Users can download the Foursquare application to their iPhone, Blackberry, or Android phone and sign up for free, then connect their Foursquare accounts to their other social media accounts.

After users download the free application and connect on Facebook or Twitter, they can connect with their friends who are also active on Foursquare. Whenever they or their friends check in to a place (that is, they're at a location and they tell others that they are there), the message is broadcast to their friends via Twitter or Facebook.

When a user checks in enough times, that user becomes the mayor of a location, which may or may not give the user access to special offers, depending on the business running a location. For example, a coffee shop might extend a free drink to anyone who becomes a mayor. Users can also earn badges as they explore and check in to locations, leave tips for other users (for instance, "The margaritas here are great!"), and may even have the opportunity to create locations that haven't appeared yet on the service.

Foursquare launched its API in November 2009, allowing application developers to extend the platform in interesting ways. Developers can build location management tools, custom search engines, and even games and other tools that interact with the Foursquare API. For example, you could build a geolocation game that allows players to also check in to Foursquare locations as a natural byproduct of normal gameplay.

The Foursquare API allows application developers to interact with the Foursquare platform. The API itself is a RESTful set of addresses to which you can send requests, so there's really nothing to download onto your server. That being said, in this article, you use a set of PHP libraries to help simplify requests and responses, but this is an entirely optional step.

You can currently request output in XML or JSON format, making requests to URLs that look like this: http://api.foursquare.com/v1/user.json. If you don't use an extension on your request, then XML is served back to you. A request to http://api.foursquare.com/v1/user results in an XML output.

There are both GET and POST methods you can use, which means you aren't just limited to reading from feeds, you can also do useful stuff like checking in and creating locations using the API. As for rate limits, your application is limited to 200 requests per hour per method, so you probably want to implement some kind of result caching to "play nice."

Methodology

The neighbourhood with the highest ratio will be the candidate neighbourhood. This is a simple, but effective approach. The model can be further enriched to include demographic data and rental costs.

The neighbourhoods of Toronto will be first listed based on the postal code.

The list has been retrieved from Wikipedia from the following link

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

For the venues investigation the Foursquare database is utilized by its respective API. The queried venues will include every kind of venue. The cafes are treated separately.

After the total number of venues is calculated and the number of cafes for each neighbourhood a ratio is formed. This ration corresponds to the average number of venues for each cafe in each neighbourhood.

Sorting the neighbourhoods based on this ratio we conclude on the candidate areas.

Results
The following is a list of the Neighbourhoods of Toronto.

List of Toronto Neighbourhoods

- The Beaches
- The Danforth West, Riverdale
- India Bazaar, The Beaches West
- Studio District
- Lawrence Park
- Davisville North
- North Toronto West, Lawrence Park
- Davisville
- Moore Park, Summerhill East
- Summerhill West, Rathnelly, South Hill, Forest Hill SE, Deer Park
- Rosedale
- St. James Town, Cabbagetown
- Church and Wellesley
- Regent Park, Harbourfront
- Garden District, Ryerson
- St. James Town
- Berczy Park
- Central Bay Street
- Richmond, Adelaide, King
- Harbourfront East, Union Station, Toronto Islands
- Toronto Dominion Centre, Design Exchange
- Commerce Court, Victoria Hotel
- Roselawn
- Forest Hill North & West, Forest Hill Road Park
- The Annex, North Midtown, Yorkville
- University of Toronto, Harbord
- Kensington Market, Chinatown, Grange Park
- CN Tower, King and Spadina, Railway Lands, Harbourfront West, Bathurst Quay, South Niagara, Island airport
- Stn A PO Boxes
- First Canadian Place, Underground city
- Christie
- Dufferin, Dovercourt Village

- Little Portugal, Trinity
- Brockton, Parkdale Village, Exhibition Place
- High Park, The Junction South
- Parkdale, Roncesvalles
- Runnymede, Swansea
- Queen's Park, Ontario Provincial Government
- Business reply mail Processing Centre, South Central Letter Processing Plant Toronto

By using the Foursquare API a list of different venues was retrieved for every neighbourhood. The different kind of venues is shown below in tubular format

Kind of Different Venues Found in Foursquare API		
'Afghan Restaurant',	'Electronics Store',	'Music Venue',
'Airport',	'Escape Room',	'Neighborhood',
'Airport Food Court',	'Ethiopian Restaurant',	'New American Restaurant',
'Airport Gate',	'Event Space',	'Nightclub',
'Airport Lounge',	'Falafel Restaurant',	'Noodle House',
'Airport Service',	'Farmers Market',	'Office',
'Airport Terminal',	'Fast Food Restaurant',	'Opera House',
'American Restaurant',	'Filipino Restaurant',	'Optical Shop',
'Antique Shop',	'Fish & Chips Shop',	'Organic Grocery',
'Aquarium',	'Fish Market',	'Other Great Outdoors',
'Art Gallery',	'Flea Market',	'Park',
'Art Museum',	'Food & Drink Shop',	'Performing Arts Venue',
'Arts & Crafts Store',	'Food Court',	'Pet Store',
'Asian Restaurant',	'Food Truck',	'Pharmacy',
'Athletics & Sports',	'Fountain',	'Pizza Place',
'Auto Workshop',	'French Restaurant',	'Plane',
'BBQ Joint',	'Fried Chicken Joint',	'Playground',
'Baby Store',	'Frozen Yogurt Shop',	'Plaza',
'Bagel Shop',	'Fruit & Vegetable Store',	'Poke Place',
'Bakery',	'Furniture / Home Store',	'Portuguese Restaurant',
'Bank',	'Gaming Cafe',	'Poutine Place',
'Bar',	'Garden',	'Pub',
'Baseball Stadium',	'Garden Center',	'Ramen Restaurant',
'Basketball Stadium',	'Gas Station',	'Record Shop',
'Beach',	'Gastropub',	'Recording Studio',
'Bed & Breakfast',	'Gay Bar',	'Rental Car Location',
'Beer Bar',	'General Entertainment',	'Restaurant',
'Beer Store',	'General Travel',	'Roof Deck',
'Belgian Restaurant',	'German Restaurant',	'Sake Bar',
'Bistro',	'Gift Shop',	'Salad Place',
'Boat or Ferry',	'Gluten-free Restaurant',	'Salon / Barbershop',
'Bookstore',	'Gourmet Shop',	'Sandwich Place',
'Boutique',	'Greek Restaurant',	'Scenic Lookout',
'Brazilian Restaurant',	'Grocery Store',	'Sculpture Garden',
'Breakfast Spot',	'Gym',	'Seafood Restaurant',
'Brewery',	'Gym / Fitness Center',	'Shoe Store',
'Bubble Tea Shop',	'Harbor / Marina',	'Shopping Mall',

'Building', 'Burger Joint', 'Burrito Place', 'Bus Line', 'Butcher', 'Café', 'Cajun / Creole Restaurant', 'Camera Store', 'Candy Store', 'Caribbean Restaurant', 'Cheese Shop', 'Chinese Restaurant', 'Chocolate Shop', 'Church', 'Climbing Gym', 'Clothing Store', 'Cocktail Bar', 'Coffee Shop', 'College Arts Building', 'College Auditorium', 'College Cafeteria', 'College Gym', 'College Rec Center', 'Colombian Restaurant', 'Comfort Food Restaurant', 'Comic Shop', 'Concert Hall', 'Convenience Store', 'Cosmetics Shop', 'Coworking Space', 'Creperie', 'Cuban Restaurant', 'Cupcake Shop', 'Dance Studio', 'Deli / Bodega', 'Department Store', 'Dessert Shop', 'Dim Sum Restaurant', 'Diner', 'Discount Store', 'Distribution Center', 'Dog Run', 'Doner Restaurant', 'Donut Shop', 'Dumpling Restaurant', 'Eastern European Restaurant',	'Health & Beauty Service', 'Health Food Store', 'Historic Site', 'History Museum', 'Hobby Shop', 'Hookah Bar', 'Hospital', 'Hostel', 'Hotel', 'Hotel Bar', 'IT Services', 'Ice Cream Shop', 'Indian Restaurant', 'Indie Movie Theater', 'Indoor Play Area', 'Intersection', 'Irish Pub', 'Italian Restaurant', 'Japanese Restaurant', 'Jazz Club', 'Jewelry Store', 'Juice Bar', 'Kitchen Supply Store', 'Korean Restaurant', 'Lake', 'Latin American Restaurant', 'Light Rail Station', 'Lingerie Store', 'Liquor Store', 'Lounge', 'Malay Restaurant', 'Market', 'Martial Arts School', 'Massage Studio', 'Mediterranean Restaurant', "Men's Store", 'Mexican Restaurant', 'Middle Eastern Restaurant', 'Miscellaneous Shop', 'Modern European Restaurant', 'Molecular Gastronomy Restaurant', 'Monument / Landmark', 'Moroccan Restaurant', 'Movie Theater', 'Museum',	'Skate Park', 'Skating Rink', 'Smoke Shop', 'Smoothie Shop', 'Snack Place', 'Soup Place', 'Southern / Soul Food Restaurant', 'Spa', 'Speakeasy', 'Sporting Goods Shop', 'Sports Bar', 'Stadium', 'Stationery Store', 'Steakhouse', 'Strip Club', 'Supermarket', 'Sushi Restaurant', 'Swim School', 'Taco Place', 'Tailor Shop', 'Taiwanese Restaurant', 'Tanning Salon', 'Tea Room', 'Thai Restaurant', 'Theater', 'Theme Restaurant', 'Toy / Game Store', 'Trail', 'Train Station', 'Vegetarian / Vegan Restaurant', 'Video Game Store', 'Vietnamese Restaurant', 'Wine Bar', "Women's Store", 'Yoga Studio'

Then a summing of the different venues for each neighbourhood gave the following numbers for each one.

Number of Venues by Neighbourhood

Berczy Park	55
Brockton, Parkdale Village, Exhibition Place	23
Business reply mail Processing Centre, South Central Letter Processing Plant Toronto	16
CN Tower, King and Spadina, Railway Lands, Harbourfront West, Bathurst Quay, South Niagara, Island airport	16
Central Bay Street	68
Christie	16
Church and Wellesley	75
Commerce Court, Victoria Hotel	100
Davisville	33
Davisville North	9
Dufferin, Dovercourt Village	13
First Canadian Place, Underground city	100
Forest Hill North & West, Forest Hill Road Park	4
Garden District, Ryerson	100
Harbourfront East, Union Station, Toronto Islands	100
High Park, The Junction South	25
India Bazaar, The Beaches West	19
Kensington Market, Chinatown, Grange Park	74
Lawrence Park	3
Little Portugal, Trinity	45
Moore Park, Summerhill East	2
North Toronto West, Lawrence Park	18
Parkdale, Roncesvalles	14
Queen's Park, Ontario Provincial Government	33
Regent Park, Harbourfront	44
Richmond, Adelaide, King	100
Rosedale	4
Roselawn	2
Runnymede, Swansea	33
St. James Town	85
St. James Town, Cabbagetown	48
Stn A PO Boxes	96
Studio District	37
Summerhill West, Rathnelly, South Hill, Forest Hill SE, Deer Park	14
The Annex, North Midtown, Yorkville	19
The Beaches	4
The Danforth West, Riverdale	43
Toronto Dominion Centre, Design Exchange	100
University of Toronto, Harbord	34

From the List it can be deducted which neighbourhoods are more populated by venues.

This is also shown on the respective bar plot below of figure 1.

However what really is considered as a business opportunity is an area where also the number of cafes is not high. Figure 2 shows the number of cafes for each neighbourhood. The combined bar plot with the total number of venues is shown if Figure 3.

However the clear picture is formed when the analytic rario is calculated. For this reason we calculate the ration and sort the neighbourhoods. The following table gives the results.

Sorted Neighbourhood based on Number of Venues per Number of Cafes

Berczy Park	55	2	27.5
Church and Wellesley	75	3	25
Stn A PO Boxes	96	4	24
The Danforth West, Riverdale	43	2	21.5
Garden District, Ryerson	100	5	20
Harbourfront East, Union Station, Toronto Islands	100	5	20
India Bazaar, The Beaches West	19	1	19
Richmond, Adelaide, King	100	6	16.666667
Toronto Dominion Centre, Design Exchange	100	6	16.666667
Queen's Park, Ontario Provincial Government	33	2	16.5
Business reply mail Processing Centre, South Central Letter Processing Plant Toronto	16	1	16
CN Tower, King and Spadina, Railway Lands, Harbourfront West, Bathurst Quay, South Niagara, Island airport	16	1	16
Little Portugal, Trinity	45	3	15
Kensington Market, Chinatown, Grange Park	74	5	14.8
Regent Park, Harbourfront	44	3	14.666667
Commerce Court, Victoria Hotel	100	7	14.285714
St. James Town	85	6	14.166667
Parkdale, Roncesvalles	14	1	14
Summerhill West, Rathnelly, South Hill, Forest Hill SE, Deer Park	14	1	14
Central Bay Street	68	5	13.6
First Canadian Place, Underground city	100	8	12.5
Studio District	37	3	12.333333
St. James Town, Cabbagetown	48	4	12
Davisville	33	3	11
North Toronto West, Lawrence Park	18	2	9
Davisville North	9	1	9
High Park, The Junction South	25	3	8.333333
Runnymede, Swansea	33	4	8.25
Dufferin, Dovercourt Village	13	2	6.5
Brockton, Parkdale Village, Exhibition Place	23	4	5.75
University of Toronto, Harbord	34	6	5.666667
The Annex, North Midtown, Yorkville	19	4	4.75
Christie	16	4	4
Forest Hill North & West, Forest Hill Road Park	4	1	4
Rosedale	4	1	4
The Beaches	4	1	4
Lawrence Park	3	1	3
Moore Park, Summerhill East	2	1	2
Roselawn	2	1	2

The result is also shown in Figure 4.

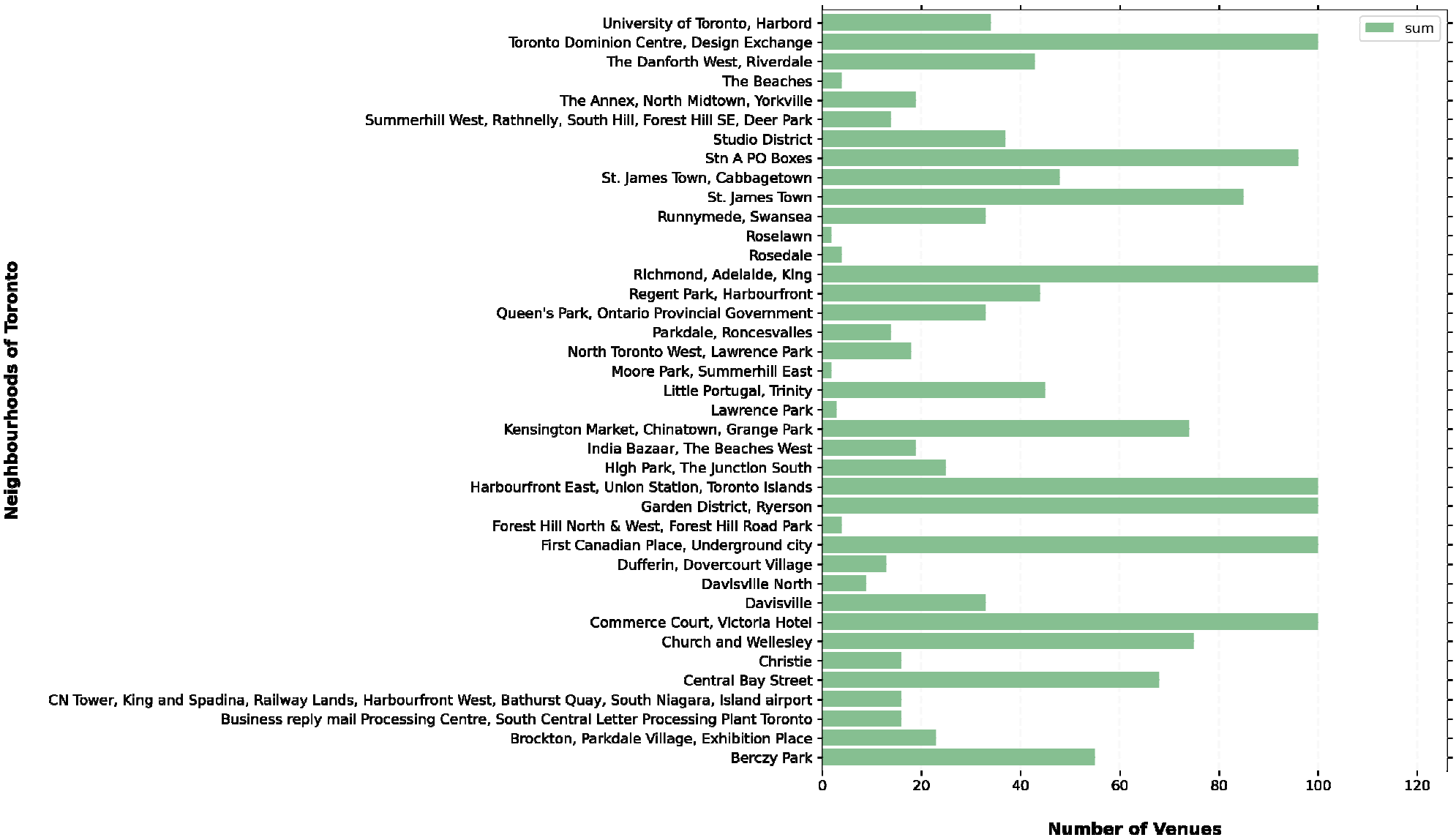
The place with the best possibilities of being successful is Berczy Park.

Discussion

The neighbourhood with the highest ratio was selected as the candidate neighbourhood. This is a simple, but effective approach. The model can be further enriched to include demographic data and rental costs.

Conclusion

Based on the previous analysis the place with the best possibilities of being successful is Berczy Park.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Business reply mail Processing Centre, South Central Letter Processing Plant Toronto
Brockton, Parkdale Village, Exhibition Place
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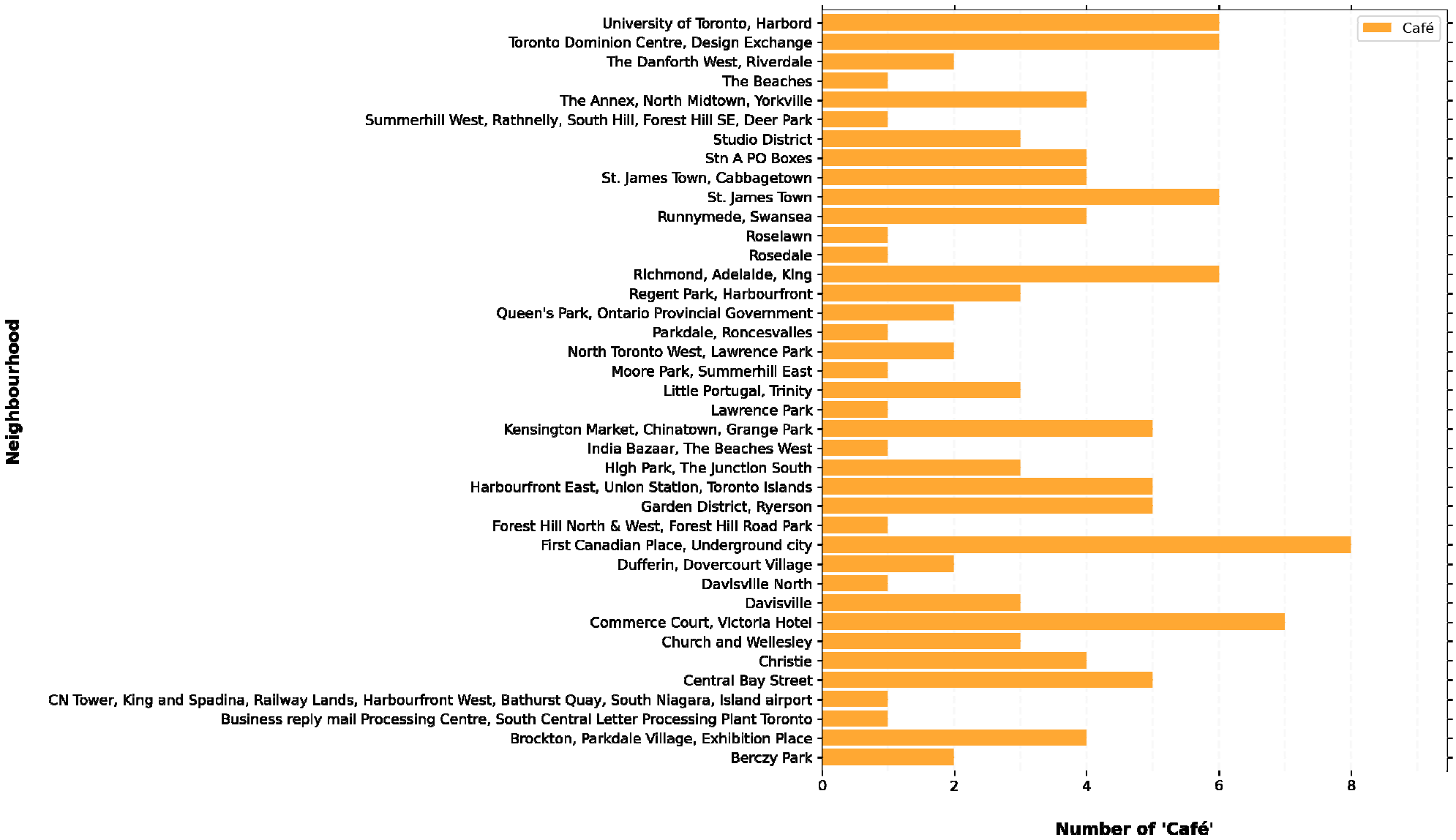
Neighbourhoods of Toronto
Number of Venues


Café
University of Toronto, Harbord
Toronto Dominion Centre, Design Exchange
The Danforth West, Riverdale
The Beaches
The Annex, North Midtown, Yorkville
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Business reply mail Processing Centre, South Central Letter Processing Plant Toronto
Brockton, Parkdale Village, Exhibition Place
Berczy Park
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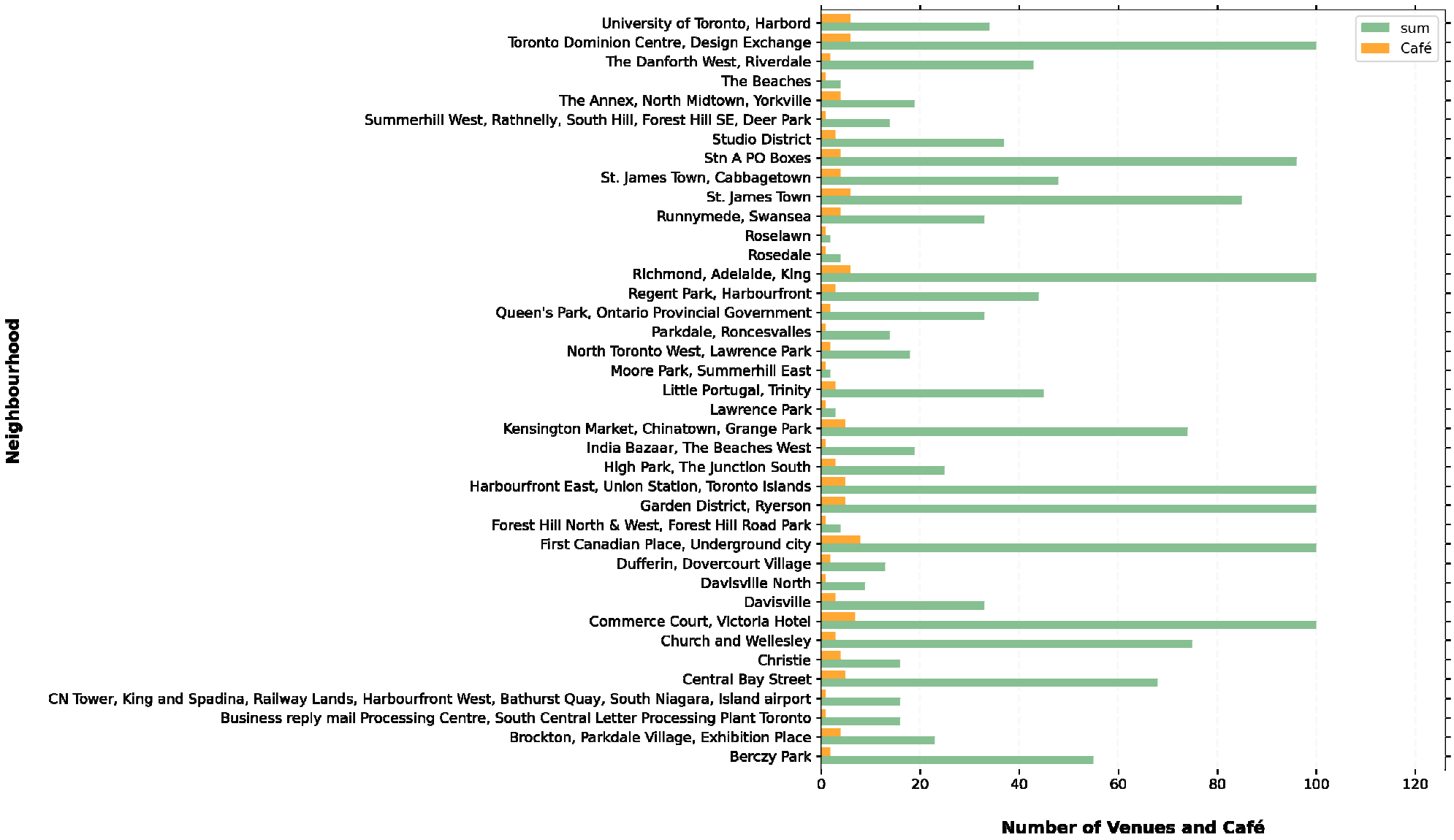
Neighbourhood
Number of 'Café'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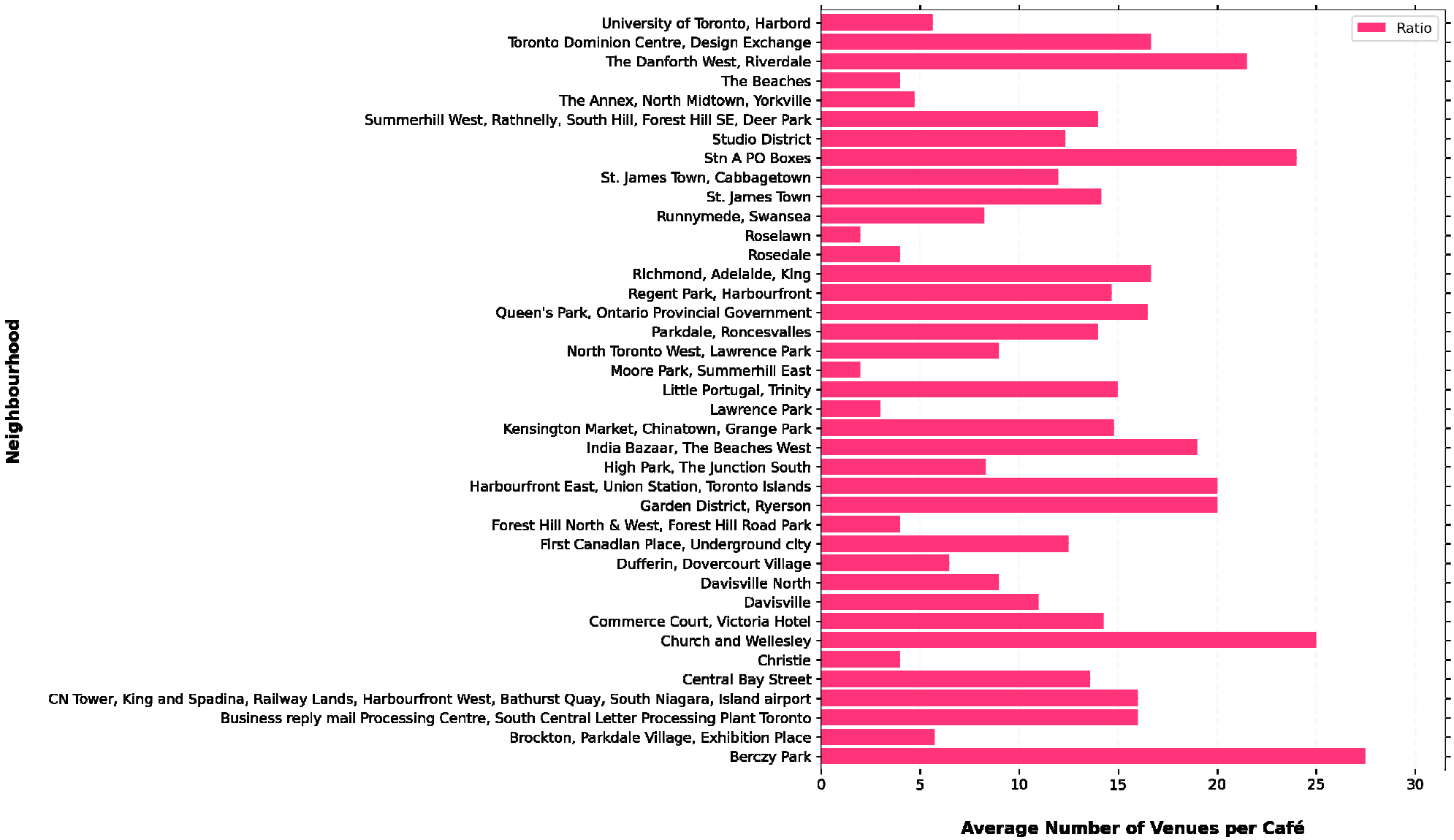
Neighbourhood
Number of Venues and Café


Ratio
University of Toronto, Harbord
Toronto Dominion Centre, Design Exchange
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0
5
10
15
20
25
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Neighbourhood
Average Number of Venues per Café