

The background is a deep blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circles and a large circular scale with degree markings from 140 to 260. Some circles have arrows indicating a clockwise direction.

THE BATTLE OF NEIGHBORHOODS

PROSPECTS OF A INDIAN RESTAURANT IN TORONTO, CANADA

FOR HSB INDIA (P) LTD

DESCRIPTION OF THE PROBLEM

- A restaurant is a business which prepares and serves food and drink to customers.
- Owning a restaurant ...
 - Has fair share of responsibilities that require you to be on your feet
 - Needs an accessible location
 - A theme or style that appeals to a broad range of customers
 - A solid menu
- First move is very important, thereby choice of location is very important.
- HSB India (P) Ltd., plan to choose the correct location to start its first restaurant in Toronto, Canada.



PROSPECTS OF A INDIAN RESTAURANT IN TORONTO, CANADA

Toronto, Canada's largest city is consistently rated among the world's top most liveable cities.

Toronto boasts ...

- a multicultural population
- diverse neighborhoods
- world class cultural attractions,
- Entertainment
- dining and shopping

As it is highly developed city so cost of doing business is also one of the highest. Thus, any new business venture or expansion needs to be analyzed carefully.

Help in reduction of risk and the Return on Investment will be reasonable.



DATA REQUIRED FOR EXPLORATORY ANALYSIS

Neighborhood has a total of 11 boroughs and 103 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 11 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

Wikipedia page

(https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M) has Postal codes beginning with M are located within the City of Toronto in the province of Ontario.

Latitude and Longitude (the geographical coordinates) of each postal code accessed from http://cocl.us/Geospatial_data

The initial Dataset is as depicted →

	PostalCode	Borough	Neighborhood	Latitude	Longitude
0	M4E	East Toronto	The Beaches	43.676357	-79.293031
1	M4K	East Toronto	The Danforth West, Riverdale	43.679557	-79.352188
2	M4L	East Toronto	The Beaches West, India Bazaar	43.668999	-79.315572
3	M4M	East Toronto	Studio District	43.659526	-79.340923
4	M4N	Central Toronto	Lawrence Park	43.728020	-79.388790

EXPLORATORY ANALYSIS

The geographical coordinate of Toronto City are 43.653963, -79.387207 is obtained with an instance of geopy geocoder.

The Foursquare API will be used to obtain the venues for the geographical location data. These will be used to explore the neighborhoods of Toronto accordingly.

1. Create the get request url (Foursquare ID and Secret are necessary)
 - a. Number of Venues we will look for is 100
 - b. Radius of Search Would be 0.5 km.
2. Create a json from the request object (using requests Module)
3. Create the lists containing the information
4. Create the dataframe from the list.

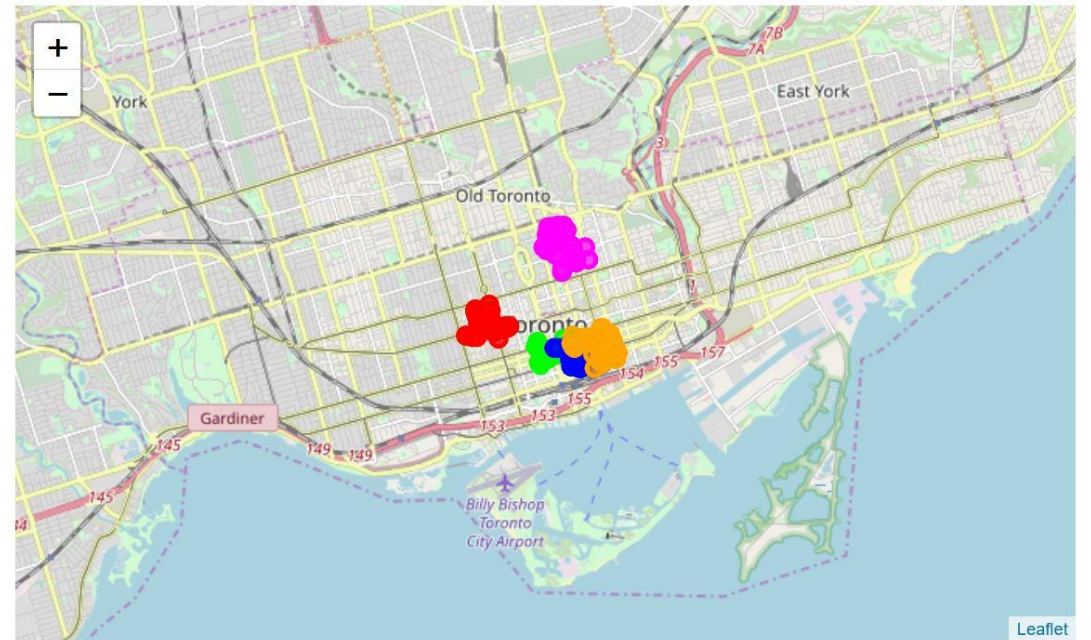
Nearby Venues

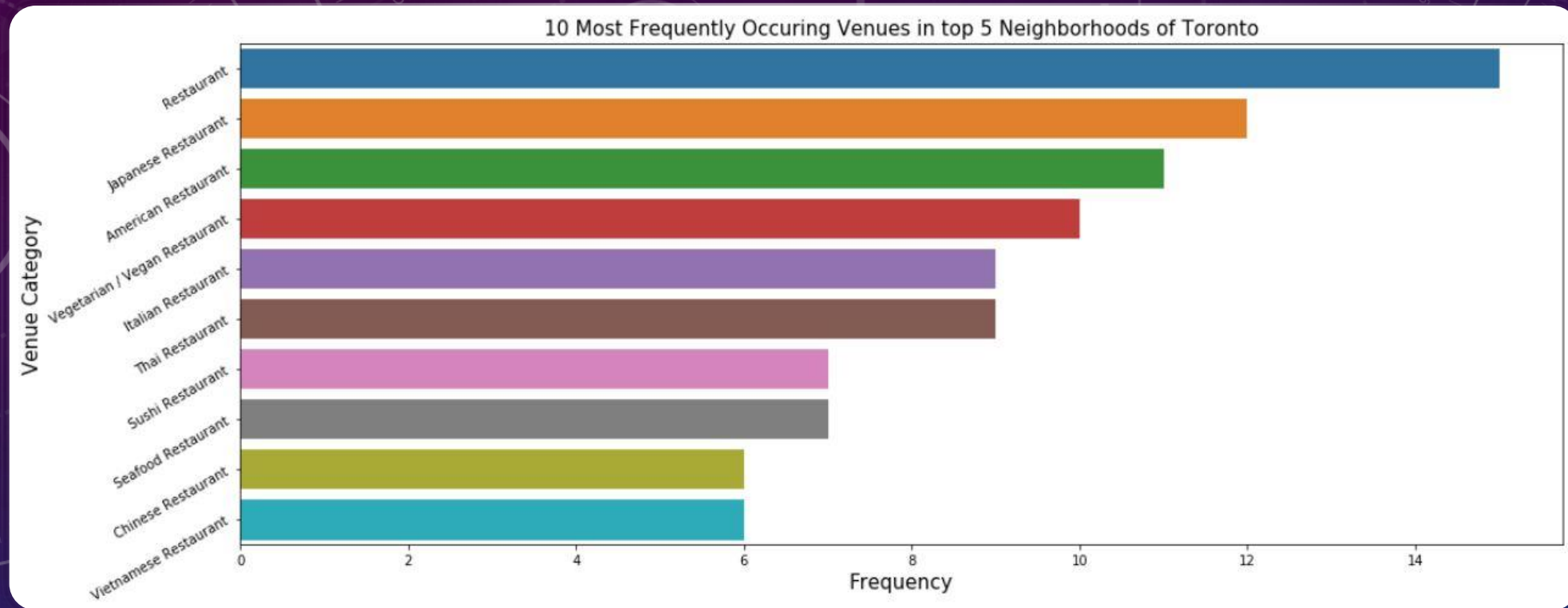
The Beaches
The Danforth West, Riverdale
The Beaches West, India Bazaar
Studio District
Lawrence Park
Davisville North
North Toronto West
Davisville
Moore Park, Summerhill East
Deer Park, Forest Hill SE, Rathnelly, South Hill, Summerhill West
Rosedale
Cabbagetown, St. James Town
Church and Wellesley
Harbourfront, Regent Park
Ryerson, Garden District
St. James Town
Berczy Park
Central Bay Street
Adelaide, King, Richmond
Harbourfront East, Toronto Islands, Union Station
Design Exchange, Toronto Dominion Centre
Commerce Court, Victoria Hotel
Roselawn
Forest Hill North, Forest Hill West
The Annex, North Midtown, Yorkville
Harbord, University of Toronto
Chinatown, Grange Park, Kensington Market
CN Tower, Bathurst Quay, Island airport, Harbourfront West, King and Spadina, Railway Lands, South Niagara
Stn A P.O. Boxes 25 The Esplanade
First Canadian Place, Underground city
Christie
Dovercourt Village, Dufferin
Little Portugal, Trinity
Brockton, Exhibition Place, Parkdale Village
High Park, The Junction South
Parkdale, Roncesvalles
Runnymede, Swansea
Business Reply Mail Processing Centre 969 Eastern

	Neighborhood	Number of Restaurants
0	Chinatown, Grange Park, Kensington Market	35
1	Adelaide, King, Richmond	30
2	Church and Wellesley	29
3	Commerce Court, Victoria Hotel	27
4	St. James Town	26

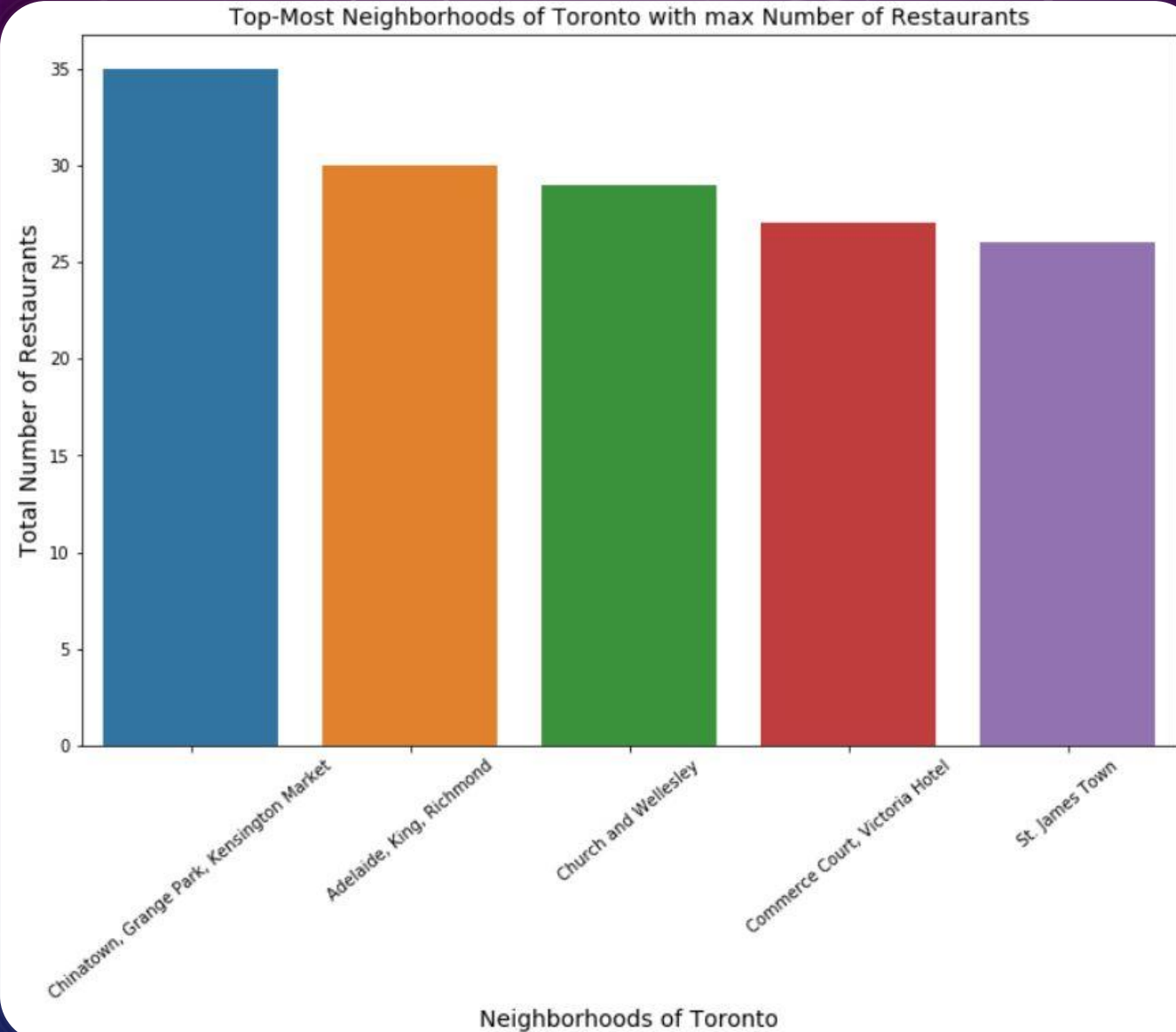
TOP 5 NEIGHBORHOODS OF TORONTO CITY THOST HAS THE
MAXIMUM NUMBER OF RESTAURANTS

VISUALIZATION OF TOP 5 NEIGHBORHOODS

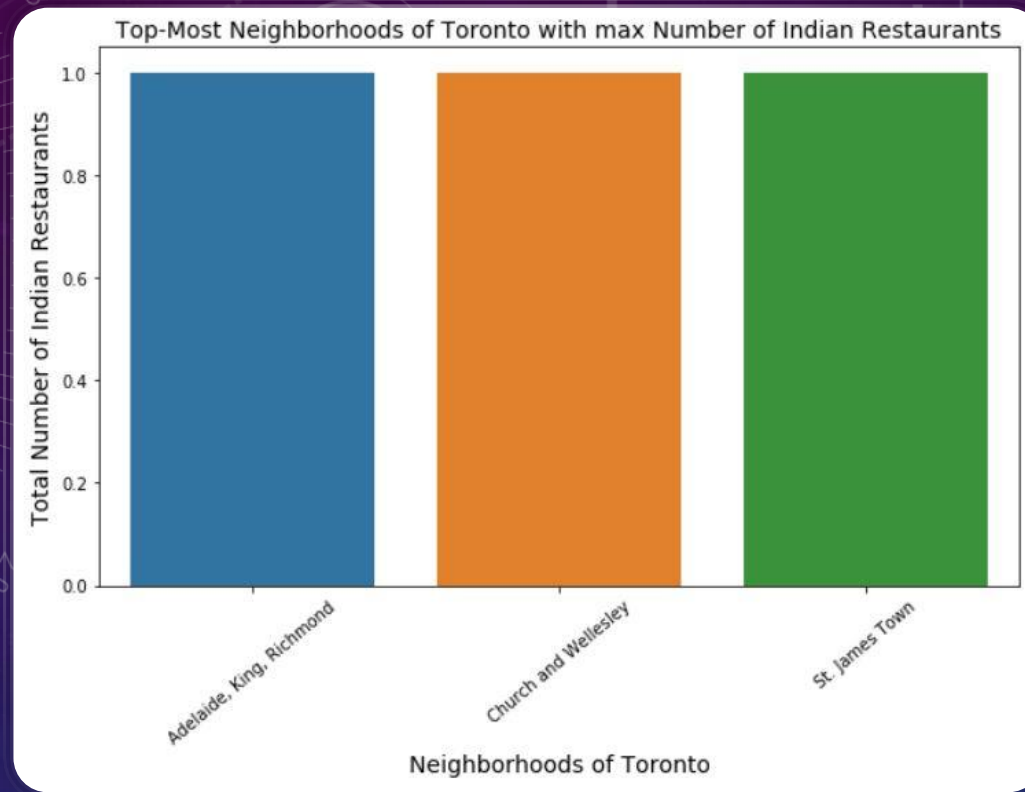




THE 10 MOST FREQUENT RESTAURANT VENUES IN THE
TOP 5 NEIGHBORHOODS.



TOP 5
NEIGHBORHOODS
WITH MAXIMUM
NUMBER OF
RESTAURANTS



INDIAN RESTAURANTS IN THOSE TOP 5 NEIGHBORHOODS

CLUSTERING – TOP 5 NEIGHBORHOOD ALONG WITH THE TOP 5 MOST COMMON VENUES

----Adelaide, King, Richmond----

	venue	freq
0	American Restaurant	0.13
1	Thai Restaurant	0.13
2	Asian Restaurant	0.10
3	Sushi Restaurant	0.10
4	Restaurant	0.10

----Chinatown, Grange Park, Kensington Market----

	venue	freq
0	Vegetarian / Vegan Restaurant	0.17
1	Vietnamese Restaurant	0.14
2	Chinese Restaurant	0.11
3	Dumpling Restaurant	0.11
4	Mexican Restaurant	0.11

----Church and Wellesley----

	venue	freq
0	Japanese Restaurant	0.17
1	Sushi Restaurant	0.14
2	Restaurant	0.10
3	Fast Food Restaurant	0.07
4	Mediterranean Restaurant	0.07

----Commerce Court, Victoria Hotel----

	venue	freq
0	American Restaurant	0.15
1	Restaurant	0.15
2	Seafood Restaurant	0.11
3	Italian Restaurant	0.07
4	Japanese Restaurant	0.07

----St. James Town----

	venue	freq
0	Restaurant	0.19
1	Italian Restaurant	0.15
2	Japanese Restaurant	0.08
3	American Restaurant	0.08
4	Seafood Restaurant	0.08



K-MEANS CLUSTERING - VISUALIZATION

RESULTS

The results of the exploratory data analysis and clustering are:

Japanese Restaurants tops the chart in the top 5 neighborhoods.

Indian Restaurant is one of the top 10 venue in St. James Town and presence in Church and Wellesley and Adelaide, King, Richmond neighborhoods.

Popular restaurants in each neighborhood:

1. St. James Town: Italian, American, Japanese
2. Chinatown, Grange Park, Kensington Market: Vietnamese, Chinese
3. Church and Wellesley: Japanese
4. Adelaide, King, Richmond: American, Thai
5. Commerce Court, Victoria Hotel: American, Thai, Japanese

It is very important to note that Clusters 1, 3 and 4 are the most suitable locations to open a brand Indian Restaurant.

REFERENCES

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Foursquare API <https://developer.foursquare.com/places-api>