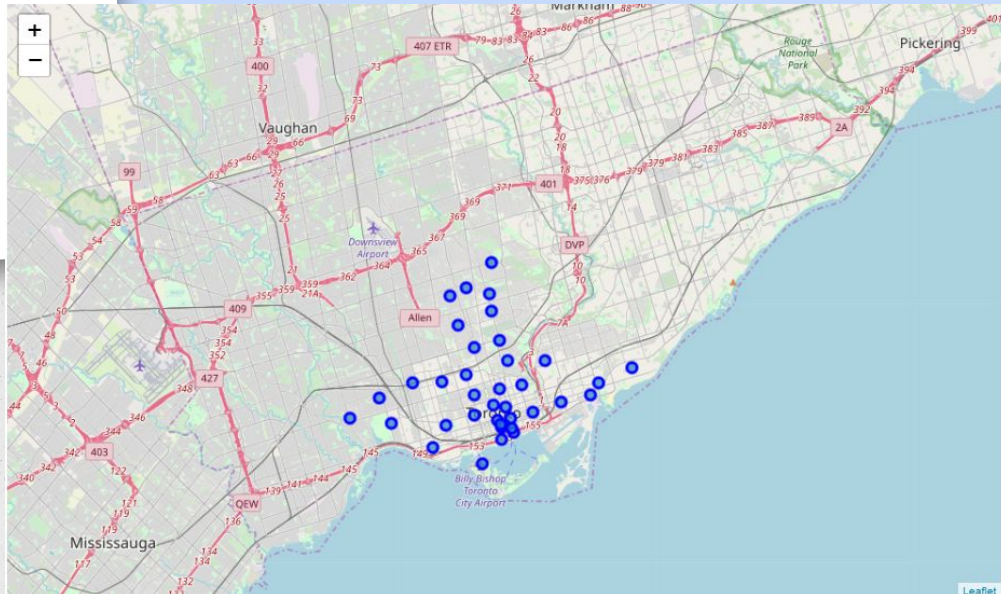


## Trending places in TORONTO

## Capstone Report

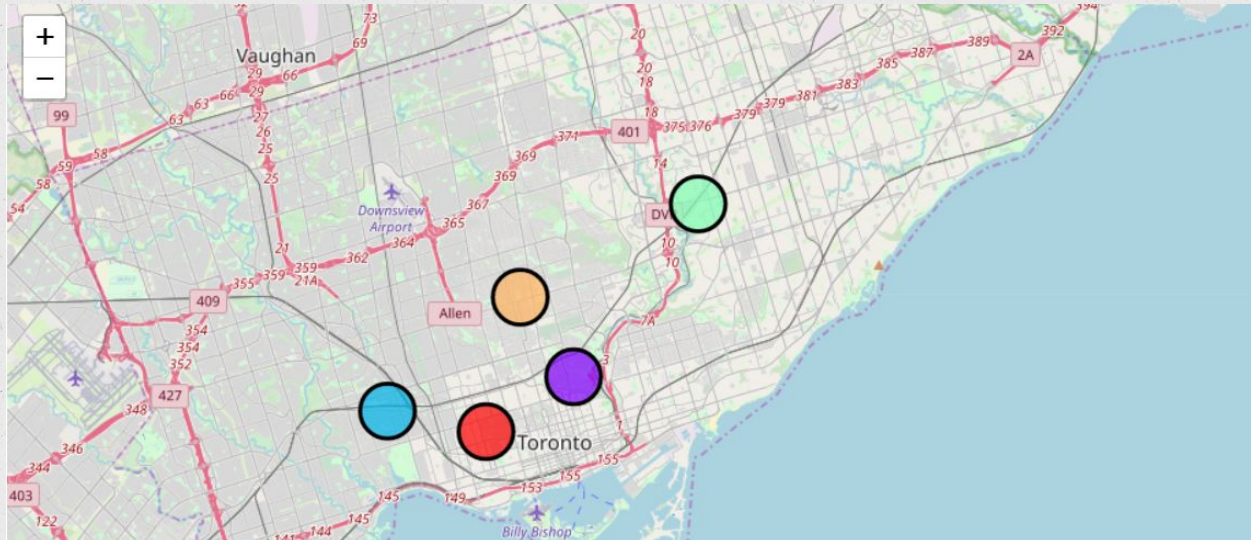


# Introduction

A famous restaurant chain, headquartered in London, had slowly expanded their arms to various untouched cities in Europe.

Collaborated with major local players in approximately 34 cities in western Europe

The company wants to expand its boundary and this time they have their eye on Toronto. The company is looking forward for major experience and food players also they are looking forward for some trending places in Toronto.



# Data

Focus here is to shortlist trending areas in the Toronto, and not the exact Restaurants and Entertainment centers.

Data from Foursquare.com as well various other website, also we will be loading some CSV containing data which might be helpful for our analysis.

	Places	Latitude	Longitude
0	East Toronto	43.740571	-79.315266
1	West Toronto	43.665612	-79.471215
2	North Toronto	43.706400	-79.404222
3	South Toronto	43.677616	-79.377684
4	Central Toronto	43.657921	-79.421661

We had divided the whole Toronto into 5 main regions called North ,West, South, East and Central Toronto. We will be selecting one out of the five areas



# Findings

We load the data in python and also use Foursquare API to generate a series of results which includes the trending area in Toronto.

Then we plot an histogram to visualise different places based on the number of different counts of venue.

	Places	Places Latitude	Places Longitude	Venue	Venue id	Venue Latitude	Venue Longitude	Venue Category
0	East Toronto	43.740571	-79.315266	Georgy Porgy's	4b2ff470f964a52003f424e3	43.741668	-79.314625	American Restaurant
1	East Toronto	43.740571	-79.315266	Baskin Robbins	4de5655118389f0558613366	43.742158	-79.314141	Ice Cream Shop
2	East Toronto	43.740571	-79.315266	Damas Grillhouse & Juice Bar	4d0b709d3bc0b60c7e5bd174	43.741839	-79.309296	Mediterranean Restaurant
3	East Toronto	43.740571	-79.315266	Shooters Snooker & Sports Club	4ddb3971922e1b86cddae4e9	43.742637	-79.313052	Pool Hall
4	East Toronto	43.740571	-79.315266	GoodLife Fitness North York Victoria Terrace	4b049809f964a520725522e3	43.742234	-79.313351	Gym

```
Out[65]: Places
Central Toronto      23
East Toronto         17
North Toronto        44
South Toronto         4
West Toronto         56
Name: Venue Category, dtype: int64
```

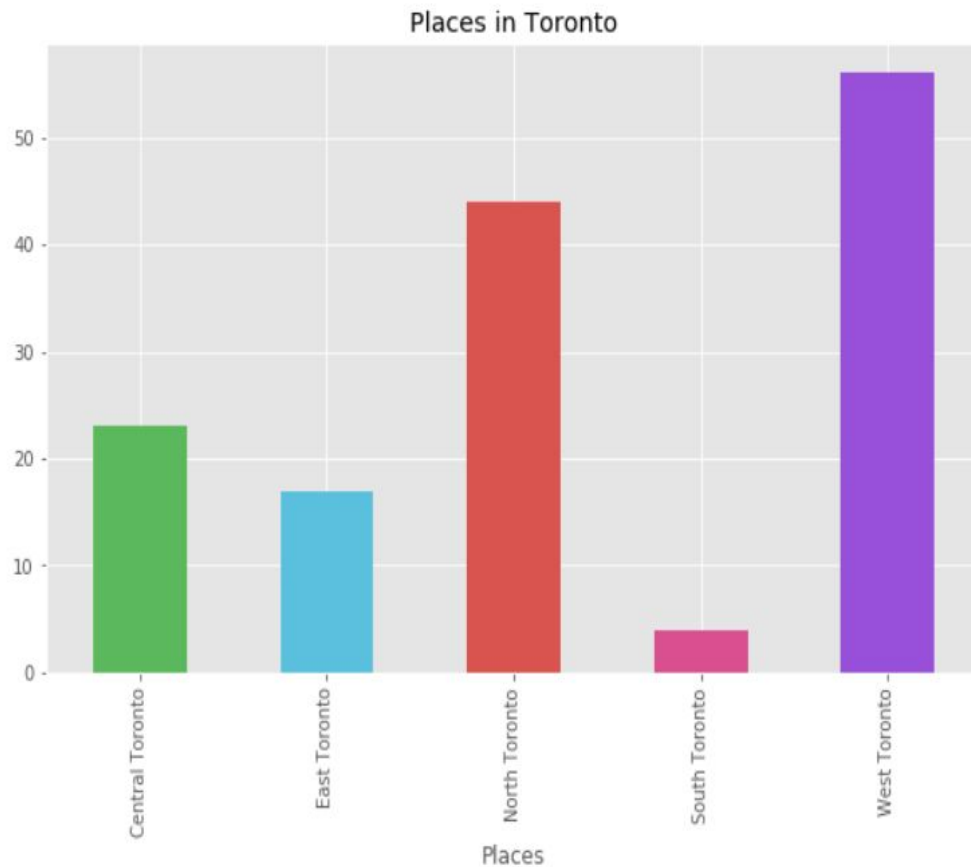
We explore the different venue using the Foursquares credentials and converting the obtained Json file in to the pandas dataframe for our further analysis.

# Findings

We group the places accordingly to the different venues counts on the data frame.

We load the data in python and also use Foursquare API to generate a series of results which includes the trending area in Toronto.

Then we plot an histogram to visualise different places based on the number of different counts of venue.



# Findings

We select top 10 venues in each of the five zones, the python output is as follows:

Based on the users rating and average number people visiting that area, we had shortlisted several places in the Toronto.

```
----Central Toronto----
      venue      freq
0          Bar      0.09
1      Dessert Shop      0.09
2      Breakfast Spot      0.09
3      Italian Restaurant      0.04
4          Pet Store      0.04
5      Salon / Barbershop      0.04
6          Gay Bar      0.04
7      Falafel Restaurant      0.04
8      Portuguese Restaurant      0.04
9          Sports Bar      0.04
```

```
----East Toronto----
      venue      fre
0      American Restaurant      0.0
1      Chinese Restaurant      0.0
2      Mediterranean Restaurant      0.0
3          Intersection      0.0
4      Indian Restaurant      0.0
5          Ice Cream Shop      0.0
6          Home Service      0.0
7          Gym      0.0
8          Pool Hall      0.0
9      Fried Chicken Joint      0.0
```

# Results

- A. North Toronto should be the place where the company should target to acquire new partner in food industry as it has 4 out 10 food centres in the most common venue table.

Also all 4 of them fall under top 4 most common venue in North Toronto.

NORTH TORONTO

In [88]:

```
Toronto_merged.loc[Toronto_merged['Cluster Labels'] == 2, Toronto_merged.columns[[1] + list(range(5, Toronto_merged.shape[1]))]]
```

Out[88]:

	Latitude	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
1	43.665612	Coffee Shop	Italian Restaurant	Café	Thai Restaurant	Nail Salon	Bakery	Grocery Store	Antique Shop	Arts & Crafts Store

# Results

B. Apart from North Toronto the Company can also Look forward in central Toronto

As west Toronto has 5 food centres out of its 10 most common venues list.

WEST TORONTO

In [90]:

```
Toronto_merged.loc[Toronto_merged['Cluster Labels'] == 4, Toronto_merged.columns[[1] + list(range(5, Toronto_merged.shape[1]))]]
```

Out[90]:

	Latitude	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
2	43.7064	Fast Food Restaurant	Japanese Restaurant	Gym	Bookstore	Pizza Place	Caribbean Restaurant	Burger Joint	Pub	Poutine Place