

# A Program for Photographers Event

## Introduction

ABC is a company based in Toronto for organizing events, currently it works on a project to organize an event for 5 days for a group of photographers from all over the world. The company has to put a good program, including a hotel of residence, a hall for meetings, places of landscape to visit, stores for shopping, restaurants and cafes. So, the company's purpose is to make a list of places of landscape in Toronto, including the nearest restaurants, cafes, and shopping stores for each place.

## Data Description

The data used in this project is provided by Foursquare location data. The data are grouped by landscape area, and each area included the information about this area and all information about restaurants, cafes, and stores which in this area.

## Step -1: Import Libraries

- import **requests** # to handle requests
- import **pandas** as pd # for data analysis
- import **numpy** as np # to handle data in a vectorized manner
- from **geopy.geocoders** import **Nominatim** # module to convert an address into latitude and longitude values
- # libraries for displaying images
- from **IPython.display** import **Image**
- from **IPython.core.display** import **HTML**
- #transforming json file into a pandas dataframe library
- from **pandas.io.json** import **json\_normalize**
- import **folium** # plotting library

## Step -2: Define FourSquare Credentials

```
CLIENT_ID = ' Foursquare ID ' # your Foursquare ID
```

```
CLIENT_SECRET = ' Foursquare Secret ' # your Foursquare Secret
```

```
VERSION = '20200525' # Current Date
```

### Step -3: Define the City and get its Latitude and Longitude

- city = 'Toronto'
- Latitude = 43.6534817
- Longitude = -79.3839347

### Step -4: Search for Hotels and Clean Dataframe

- Searched Hotels in 500 m radius by using Foursquare API and cleaned the Hotel Dataframe

	name	categories	address	lat	lng	postalCode	state
0	Chelsea Hotel	Hotel	33 Gerrard Street West	43.658498	-79.383097	M5G 1Z4	ON
1	Sheraton Centre Toronto Hotel	Hotel	123 Queen Street West	43.650594	-79.384530	M5H 2M9	ON
2	Pantages Hotel & Spa	Hotel	200 Victoria St	43.654498	-79.379035	NaN	ON
3	Crew Room Eaton Chelsea Hotel	Hotel	33 Gerrard Street West	43.658094	-79.382711	NaN	ON
4	Cosmopolitan Toronto Centre Hotel & Spa	Hotel	8 Colborne St	43.649064	-79.377598	M5E 1E1	ON

### Step -5: Search for Parks and Clean Dataframe

- Searched Parks in 10000 m radius by using Foursquare API and cleaned the Parks Dataframe

	name	categories	address	lat	lng	postalCode	state
8	Queen's Park	Park	University Ave.	43.663946	-79.392180	M5R 2E8	ON
13	Trinity Bellwoods Park	Park	1053 Dundas St. W.	43.647072	-79.413756	M5H 2N2	ON
16	Riverdale Park West	Park	500 Gerrard St.	43.666048	-79.360941	M5A 2H3	ON
22	Barbara Hall Park	Park	519 Church St	43.666879	-79.381068	M4Y 2K9	ON
25	Riverdale Park East	Park	550 Broadview Ave	43.669951	-79.355493	M4K 2P1	ON

## Step -6: Search for Restaurants and Clean Dataframe

- Searched Restaurant in 10000 m radius by using Foursquare API and cleaned the Restaurant Dataframe

	name	categories	address	lat	lng	postalCode	state
0	Hemispheres Restaurant & Bistro	American Restaurant	110 Chestnut Street	43.654884	-79.385931	M5G 1R3	ON
2	Victoria's Restaurant	Restaurant	37 King Street East	43.649298	-79.376431	M5C 1E9	ON
3	Rol San Restaurant 龍笙棧	Dim Sum Restaurant	323 Spadina Ave.	43.654318	-79.398650	M5T 2E9	ON
4	Studio Restaurant	Breakfast Spot	389 Church St.	43.661500	-79.379319	M5B	ON
5	Victor Restaurant & Bar	Bar	30 Mercer Street	43.645634	-79.391125	M5V 1H3	ON

## Step -7: Search for Cafeteria and Clean Dataframe

- Searched Cafeteria in 10000 m radius by using Foursquare API and cleaned the Cafeteria Dataframe

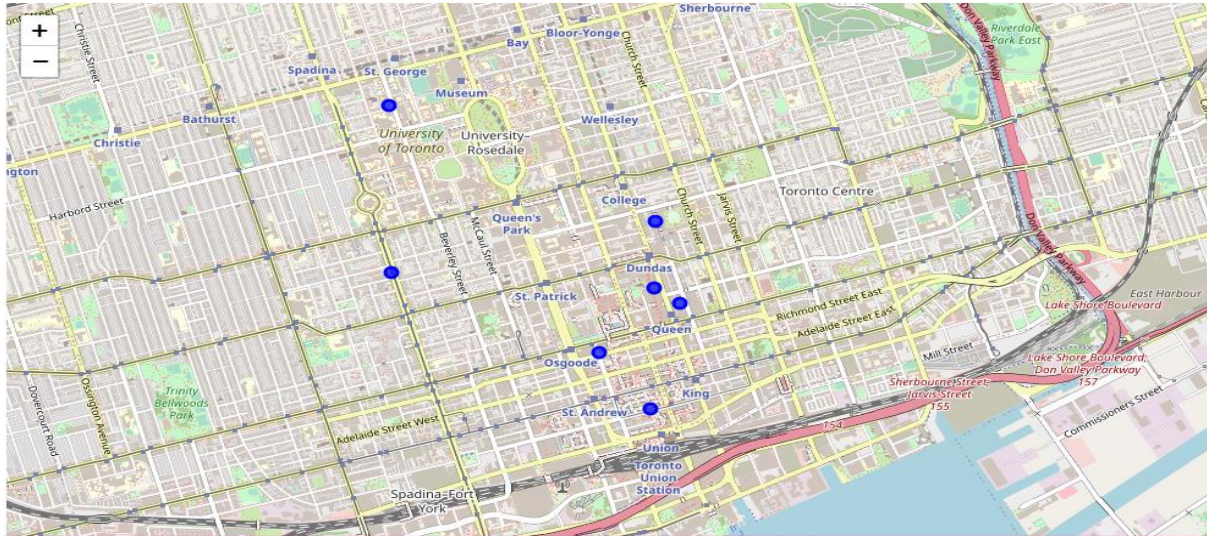
	name	categories	address	lat	lng	postalCode	state
1	Stay Cafeteria 慢走	Asian Restaurant	388 Spadina Ave	43.655454	-79.399163	ON	M5T 2G5
9	De La Salle College Cafeteria	College Cafeteria	131 Farnham Avenue	43.683003	-79.397815	ON	M4V 1H7
19	Marketeria	Restaurant	30 Bond St.	43.653585	-79.378843	ON	M5B 1W8
21	The Hub	College Cafeteria	350 Victoria St.	43.658585	-79.380622	ON	M5B 2K3
24	Innis College	Student Center	2 Sussex Ave	43.665556	-79.399298	ON	M5S 1J5
27	6th Floor Cafeteria 12 Concorde Place	Café	12 Concorde Place	43.721861	-79.329339	ON	m3c 3k7

## Step -8: Search for Shopping Stores and Clean Dataframe

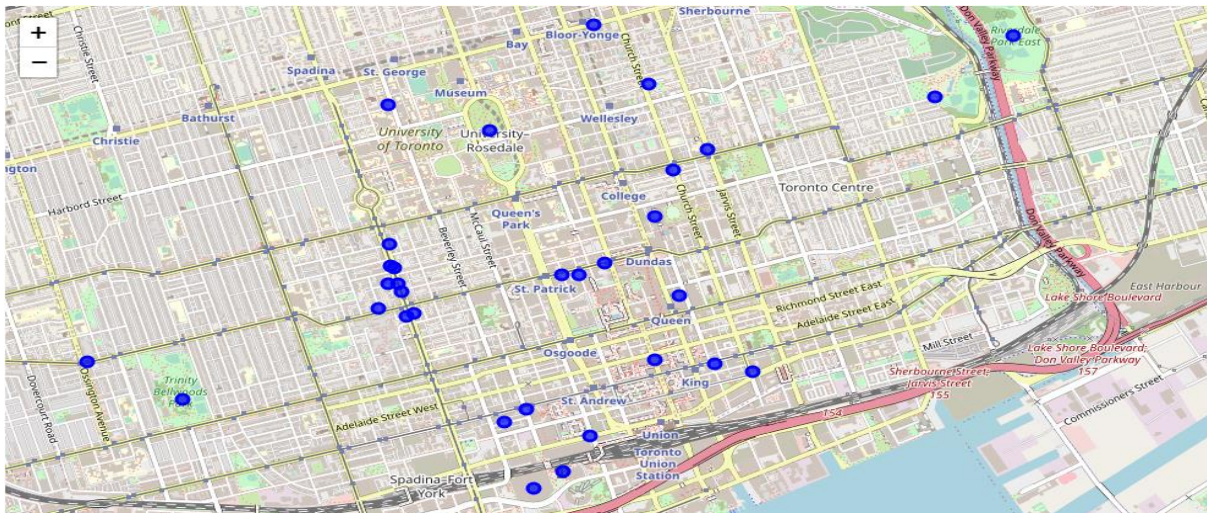
- Searched Shopping Stores in 1000 m radius by using Foursquare API and cleaned the Shopping Stores Dataframe

	name	categories	address	lat	lng	postalCode	state
1	TD Centre Shopping Concourse	Shopping Mall	66 Wellington St W	43.647184	-79.380932	M5K 1A1	ON
2	CF Toronto Eaton Centre	Shopping Mall	220 Yonge St	43.654540	-79.380677	M5B 2H1	ON

## Step -9: Generate map to Visualize Hotels, Shopping Stores and Cafeteria and how they Cluster Together



## Step -10: Generate Map to Visualize Park, Restaurant and Cafeteria and how they Cluster Together



## Results and Conclusion

We can use this tools and techniques for raise business by quickly getting all amenities for better planning of Visits.