IBM- Capstone project

A program for the participants of a conference.

Introduction:

I am an Indian and i frequently visit conferences all over the world to learn new things. So please like me who are students, faculties, organizers, researchers who visit the conferences, tend to visit new places in different parts of the world. So the conferences purposes is to make a list of places which are of the interest of the participants from all over the world. I have choosen the location as Toronto, Canada. Because it is one of the main cities in the North American Continent.

Data Description and Questions to be answered:

We will use the data provided by the FourSquare API, to fetch all the data that is needed by the conference organizers to be provided by the organizers. We will provide information regarding the **best hotels, parks and restaurants stores** in the area of Toronto.

```python
import numpy as np

import pandas as pd
pd.set_option('display.max_columns', None)
pd.set_option('display.max_rows', None)

import json

from geopy.geocoders import Nominatim

import requests
from pandas.io.json import json_normalize

import matplotlib.cm as cm
import matplotlib.colors as colors

from sklearn.cluster import KMeans

import folium


CLIENT_ID = '2VJSZMEZBVCII3HYWBCNGEDFTEI3JAVBB3BU0X1XRGN4LGM1'
CLIENT_SECRET = '0JYZ0FESUQ02YKG3WUKAAOIHTIMVKHM1TYXYBW1ML3PF4QGB'
VERSION = '20200417'
LIMIT= 50
```

```python
city = 'Toronto'
geolocator = Nominatim(user_agent="foursquare_agent")
location = geolocator.geocode(city)
latitude = location.latitude
longitude = location.longitude
print(latitude, longitude)
```

    43.6534817 -79.3839347

```python
search_query = 'Hotel'
radius = 500

url = 'https://api.foursquare.com/v2/venues/search?client_id={}&client_secret={}&l
.format(CLIENT_ID, CLIENT_SECRET, latitude, longitude, VERSION, search_query, radi

result_hotel = requests.get(url).json()

result_hotel

venue_hotel = result_hotel['response']['venues']

df = json_normalize(venue_hotel)
df.head()
```

```
/usr/local/lib/python3.6/dist-packages/ipykernel_launcher.py:12: FutureWarning
  if sys.path[0] == '':
```

	id	name	categories	referralId	hasPe
0	4ab2d511f964a5209b6c20e3	Sheraton Centre Toronto Hotel	[{'id': '4bf58dd8d48988d1fa931735', 'name': 'H...	v-1587139133	Fa
1	51d212c3498ebf27dc469bc9	Chelsea Hotel	[{'id': '4bf58dd8d48988d1fa931735', 'name': 'H...	v-1587139133	Fa
2	4af96fbbf964a520c01122e3	One King West Hotel & Residence	[{'id': '4bf58dd8d48988d1fa931735', 'name': 'H...	v-1587139133	Fa
3	4ae61cf6f964a520caa421e3	Pantages Hotel & Spa	[{'id': '4bf58dd8d48988d1fa931735', 'name': 'H...	v-1587139133	Fa
4	51e48697498eded9073c6c17	Crew Room Eaton Chelsea Hotel	[{'id': '4bf58dd8d48988d1fa931735', 'name': 'H...	v-1587139133	Fa

```python
new_columns = ['name', 'categories'] + [col for col in df.columns if col.startswith
new_df = df.loc[:,new_columns]

def get_category_type(row):
    try:
        categories_list = row['categories']
    except:
        categories_list = row['venue.categories']

    if len(categories_list) == 0:
        return None
    else:
        return categories_list[0]['name']

new_df['categories'] = new_df.apply(get_category_type, axis=1)

new_df.columns = [column.split('.')[-1] for column in new_df.columns]

new_df.head()
```

	name	categories	address	crossStreet	lat	lng	labeledLa
	Sheraton		123				

0	Centre Toronto Hotel	Hotel	Queen Street West	at York St.	43.650594	-79.384530	[{'label': 'displa 43.6505944
1	Chelsea Hotel	Hotel	33 Gerrard Street West	at Yonge St	43.658498	-79.383097	[{'label': 'displa 43.6584975915
2	One King West Hotel & Residence	Hotel	1 King St W	at Yonge St.	43.649139	-79.377876	[{'label': 'displa 43.6491395
3	Pantages Hotel & Spa	Hotel	200 Victoria St	at Shuter St	43.654498	-79.379035	[{'label': 'displa 43.6544979703
4	Crew Room Eaton Chelsea Hotel	Hotel	33 Gerrard Street West	NaN	43.658094	-79.382711	[{'label': 'displa 43.6580943558

```
new_df= new_df.drop(['cc', 'city', 'country', 'crossStreet', 'distance', 'formatte
                     'labeledLatLngs', 'id'], axis=1)
new_df
```

	name	categories	
0	Sheraton Centre Toronto Hotel	Hotel	123 Que

1	Chelsea Hotel	Hotel	33 Gerr
2	One King West Hotel & Residence	Hotel	
3	Pantages Hotel & Spa	Hotel	
4	Crew Room Eaton Chelsea Hotel	Hotel	33 Gerr
5	The Rex Hotel Jazz & Blues Bar	Jazz Club	1
6	VFM Test Hotel	Hotel	
7	Cosmopolitan Toronto Centre Hotel & Spa	Hotel	
8	Sheraton Centre Hotel Club Lounge	Lounge	
9	Sheraton Centre Toronto Hotel - Grand Ballroom	Ballroom	123 Que
10	Stathcona Hotel	Hotel	
11	Pentagos hotel	Residential Building (Apartment / Condo)	
12	Shizen Spa at the Pantages Hotel	Spa	
13	Pantages Hotel Gym	Gym	
14	Pantages Hotel Toronto Centre	Residential Building (Apartment / Condo)	200
15	650 Hotel	Hotel	
16	Be SixFifty Hotel	Hotel	
17	The Spa At The Adelaide Hotel	Spa	
18	The Adelaide Hotel Toronto	Hotel	
19	Smoldering remains of the Empress Hotel	Hotel	
20	Bond Place Hotel Parking Lot	Miscellaneous Shop	Bo
21	Chelsea Hotel, Toronto Meetings & Events Venue	Convention Center	33 Gerr
22	St Regis Hotel	Hotel	
23	Suites at One King West Hotel Toronto	Hotel	1 King S
24	Henri's Bar at One King West hotel	American Restaurant	
25	89 Chestnut Residence	College Residence Hall	
26	DoubleTree by Hilton	Hotel	108
27	Marriott Downtown at CF Toronto Eaton Centre	Hotel	
28	Grand Ballroom	Event Space	12
29	Fitness Centre	Gym	
30	Kumar For Men	Men's Store	S

	name	categories	address
31	Hilton	Hotel	145
32	Pool	Pool	
33	Cambridge Suites Toronto	Hotel	15
34	Lobby Lounge at the Shangri-La Toronto	Lounge	188
35	Bistro on Two	Breakfast Spot	12
36	Fitness Centre	Gym	S
37	Op mijn hotelkamer In Toronto	Hotel	
38	Zipcar	Rental Car Location	200
39	Shangri-La Toronto	Hotel	188
40	Bosk at Shangri-La	Asian Restaurant	188
41	Delta Hotels & Resorts Corporate Office	Office	77 King Stree
42	Bistro	Restaurant	1

```
array= ['Hotel']
df_hotel= new_df.loc[new_df['categories'].isin(array)]
df_hotel
```

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	name	categories	address
0	Sheraton Centre Toronto Hotel	Hotel	123 Queen Street West

1	Chelsea Hotel	Hotel	33 Gerrard Street West
2	One King West Hotel & Residence	Hotel	1 King St W
3	Pantages Hotel & Spa	Hotel	200 Victoria St
4	Crew Room Eaton Chelsea Hotel	Hotel	33 Gerrard Street West
6	VFM Test Hotel	Hotel	123 Test Drive
7	Cosmopolitan Toronto Centre Hotel & Spa	Hotel	8 Colborne St
10	Stathcona Hotel	Hotel	NaN
15	650 Hotel	Hotel	650 Bay Street
16	Be SixFifty Hotel	Hotel	650 Bay Street
18	The Adelaide Hotel Toronto	Hotel	325 Bay St
19	Smoldering remains of the Empress Hotel	Hotel	335 Yonge St
22	St Regis Hotel	Hotel	325 Bay St
23	Suites at One King West Hotel Toronto	Hotel	1 King St W Toronto ON Canada
26	DoubleTree by Hilton	Hotel	108 Chestnut Street
27	Marriott Downtown at CF Toronto Eaton Centre	Hotel	525 Bay Street
31	Hilton	Hotel	145 Richmond St W
33	Cambridge Suites Toronto	Hotel	15 Richmond ST E
37	Op mijn hotelkamer In Toronto	Hotel	NaN
39	Shangri-La Toronto	Hotel	188 University Ave.

```
search_query = 'Park'
radius = 10000

url = 'https://api.foursquare.com/v2/venues/search?client_id={}&client_secret={}&l
.format(CLIENT_ID, CLIENT_SECRET, latitude, longitude, VERSION, search_query, radi
url
```

⤷   'https://api.foursquare.com/v2/venues/search?client_id=2VJSZMEZBVCII3HYWBCNGED

```
result_park = requests.get(url).json()
venue_park = result_park['response']['venues']

park_df = json_normalize(venue_park)
park_df.head()
```

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```
/usr/local/lib/python3.6/dist-packages/ipykernel_launcher.py:4: FutureWarning:
  after removing the cwd from sys.path.
```

	id	name	categories	referralId	hash

0	4b170e47f964a5208cc123e3	Queen's Park Subway Station	[{'id': '4bf58dd8d48988d1fd931735', 'name': 'M...	v-1587139172	
1	4b54deadf964a520a3d027e3	Grange Park	[{'id': '4bf58dd8d48988d163941735', 'name': 'P...	v-1587139172	
2	4b9177e4f964a520d2be33e3	TTC Streetcar #403 - Victoria park	[{'id': '4bf58dd8d48988d1fc931735', 'name': 'L...	v-1587139172	
3	4d3a1d23325ff04db2dd1845	Residences at College Park North	[{'id': '4d954b06a243a5684965b473', 'name': 'R...	v-1587139172	
4	4bfc5019da7120a132df49fd	St. Andrews Playground / Dog Park	[{'id': '4bf58dd8d48988d163941735', 'name': 'P...	v-1587139172	

```python
new_column_park = ['name', 'categories'] + [col for col in park_df.columns if col.
new_df_park = park_df.loc[:,new_column_park]

def get_category_type(row):
    try:
        categories_list1 = row['categories']
    except:
        categories_list1 = row['venue.categories']

    if len(categories_list1) == 0:
        return None
    else:
        return categories_list1[0]['name']

new_df_park['categories'] = new_df_park.apply(get_category_type, axis=1)

new_df_park.columns = [column.split('.')[-1] for column in new_df_park.columns]

new_df_park.head()
```

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	name	**categories**	**address**	**crossStreet**	**lat**	**lng**	**labeledL**
	Queen's		691				

	name	categories		cross street	latitude	longitude	
0	Park Subway Station	Metro Station	University Ave	at College St	43.660006	-79.390272	[{'label': 'disp 43.660006357
1	Grange Park	Park	NaN	NaN	43.652488	-79.392053	[{'label': 'disp 43.652487552
2	TTC Streetcar #403 - Victoria park	Light Rail Station	NaN	NaN	43.650735	-79.386921	[{'label': 'disp 43.650735
3	Residences at College Park North	Residential Building (Apartment / Condo)	763 Bay St.	btwn. College St. and Gerrard St.	43.659822	-79.385159	[{'label': 'disp 43.659821577
4	St. Andrews Playground / Dog Park	Park	450 Adelaide Street West	Brant St & Adelaide St W	43.647388	-79.398752	[{'label': 'disp 43.647387593

```
new_df_park= new_df_park.drop(['cc', 'city', 'country', 'crossStreet', 'distance',
                               'labeledLatLngs', 'id'], axis=1)
new_df_park
```

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	name	categories
0	Queen's Park Subway Station	Metro Station

1	Grange Park	Park	
2	TTC Streetcar #403 - Victoria park	Light Rail Station	
3	Residences at College Park North	Residential Building (Apartment / Condo)	
4	St. Andrews Playground / Dog Park	Park	45
5	Queen's Park	Park	
6	One Park Lane	Residential Building (Apartment / Condo)	
7	Physiomed College Park	Medical Center	
8	Berczy Park	Park	
9	Moss Park Tennis Courts	Tennis Court	
10	Crunch Fitness - College Park	Gym / Fitness Center	
11	Clarence Square Park	Park	
12	Toothworks - College Park Dental	Dentist's Office	
13	St Lawrence on the Park	Building	
14	Riverdale Park West	Park	
15	Regent Park Community Centre	Community Center	
16	Regent Park	Neighborhood	
17	Trinity Bellwoods Park	Park	
18	Riverdale Park East	Park	
19	Tommy Thompson Park	Park	
20	Bellevue Square Park	Park	btwn B
21	Barbara Hall Park	Park	
22	HTO Park	Park	
23	High Park	Park	
24	Cawthra Square Dog Park	Dog Run	
25	Parliament Square Park	Park	
26	RBC WaterPark Place	Office	
27	Barbara Hall Park	Park	
28	Park Hyatt Bridal Suite	Hotel	
29	Wilfrid Park	Office	
30	Larry Sefton Park	Plaza	
31	Regent Park Community Health Centre	Community Center	
32	Winchester Park	Playground	
33	Dog Park - Canoe Landing Park	Park	
34	Regent Park	Park	

34	Regent Park	Park
35	Canoe Landing Park	Park
36	College Park	Shopping Mall
37	Village of Yorkville Park	Park
38	Coronation Park	Park	7
39	Orphan's Greenspace Dog Park	Dog Run
40	Trinity Park And Labyrinth	Garden
41	GoodLife Fitness Toronto Bloor and Park	Gym
42	Stanley Park	Park
43	Trinity Square Park	Plaza
44	Club UNO - One Park Place - Amenities Space	Recreation Center
45	Park Stage	Theater
46	Stanley Park (Dog Park)	Dog Run
47	Osgoode Hall Park	Park
48	Macgregor Park	Park
49	Vinci Park	General Travel

```
new_df_park = new_df_park.dropna(axis=0, how='any', thresh=None, subset=None, inpl
new_df_park
```

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	name	categories	
0	Queen's Park Subway Station	Metro Station	69

3	Residences at College Park North	Residential Building (Apartment / Condo)	
5	Queen's Park	Park	
6	One Park Lane	Residential Building (Apartment / Condo)	
7	Physiomed College Park	Medical Center	
10	Crunch Fitness - College Park	Gym / Fitness Center	
14	Riverdale Park West	Park	
15	Regent Park Community Centre	Community Center	
17	Trinity Bellwoods Park	Park	105
18	Riverdale Park East	Park	55
20	Bellevue Square Park	Park	btwn Bellevu
21	Barbara Hall Park	Park	
23	High Park	Park	
35	Canoe Landing Park	Park	
36	College Park	Shopping Mall	
38	Coronation Park	Park	711 Lal
41	GoodLife Fitness Toronto Bloor and Park	Gym	
43	Trinity Square Park	Plaza	
47	Osgoode Hall Park	Park	

```
df_park = new_df_park[new_df_park.categories == 'Park']
df_park
```

	name	categories	address	lat	lng
5	Queen's Park	Park	University Ave.	43.663946	-79.392180
14	Riverdale Park West	Park	500 Gerrard St.	43.666048	-79.360941
17	Trinity Bellwoods Park	Park	1053 Dundas St. W.	43.647072	-79.413756
18	Riverdale Park East	Park	550 Broadview Ave	43.669951	-79.355493
20	Bellevue Square Park	Park	btwn Bellevue & Augusta Ave.	43.653610	-79.402199
21	Barbara Hall Park	Park	519 Church St	43.666879	-79.381068
23	High Park	Park	1873 Bloor St. W	43.646479	-79.463425
35	Canoe Landing Park	Park	50 Fort York Blvd	43.638762	-79.397067
38	Coronation Park	Park	711 Lake Shore Blvd. W	43.634553	-79.405403
47	Osgoode Hall Park	Park	130 Queen St W	43.651105	-79.386269

```
ues/search?client_id={}&client_secret={}&ll={},{}&v={}&query={}&radius={}&limit={}
```

```
'https://api.foursquare.com/v2/venues/search?client_id=2VJSZMEZBVCII3HYWBCNGED
```

```
result_restaurant = requests.get(url).json()

venue_restaurant = result_restaurant['response']['venues']

Restaurant_df = json_normalize(venue_restaurant)
Restaurant_df.head()
```

```
/usr/local/lib/python3.6/dist-packages/ipykernel_launcher.py:5: FutureWarning:
  """
```

| | id | name | categories | referralId | has |

0	4ad4c05ff964a52048f720e3	Hemispheres Restaurant & Bistro	[{'id': '4bf58dd8d48988d14e941735', 'name': 'A...	v-1587139370
1	4ad4c05cf964a52006f620e3	Victoria's Restaurant	[{'id': '4bf58dd8d48988d1c4941735', 'name': 'R...	v-1587139370
2	4b266f05f964a520657b24e3	Goldstone Noodle Restaurant 金石	[{'id': '4bf58dd8d48988d1d1941735', 'name': 'N...	v-1587139370
3	4ada5d5bf964a520e92121e3	The Hot House Restaurant & Bar	[{'id': '4bf58dd8d48988d14e941735', 'name': 'A...	v-1587139370
4	4ae29812f964a520288f21e3	Swatow Restaurant 汕頭小食家	[{'id': '4bf58dd8d48988d145941735', 'name': 'C...	v-1587139370

```python
Restaurant_new_columns = ['name', 'categories'] + [col for col in Restaurant_df.co
new_df_restaurant = Restaurant_df.loc[:,Restaurant_new_columns]

def get_category_type(row):
    try:
        categories_list3 = row['categories']
    except:
        categories_list3 = row['venue.categories']

    if len(categories_list3) == 0:
        return None
    else:
        return categories_list3[0]['name']

new_df_restaurant['categories'] = new_df_restaurant.apply(get_category_type, axis=

new_df_restaurant.columns = [column.split('.')[-1] for column in new_df_restaurant

new_df_restaurant.head()
```

	name	categories	address	lat	lng	labeledLatLngs	dist
	Hemispheres	American	110			[{'label': 'display', 'lat':

	name	categories	address	lat	lng	labeledLatLngs
0	Restaurant & Bistro	American Restaurant	Chestnut Street	43.654884	-79.385931	[{'label': 'display', 'lat': 43.65488413420439...
1	Victoria's Restaurant	Restaurant	37 King Street East	43.649298	-79.376431	[{'label': 'display', 'lat': 43.64929834396347...
2	Goldstone Noodle Restaurant 金石	Noodle House	266 Spadina Ave	43.652278	-79.398039	[{'label': 'display', 'lat': 43.6522783893466,...
3	The Hot House Restaurant & Bar	American Restaurant	35 Church St	43.648824	-79.373702	[{'label': 'display', 'lat': 43.64882370529773...
4	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 Spadina Ave.	43.653866	-79.398334	[{'label': 'display', 'lat': 43.65386562507761...

```
new_df_restaurant= new_df_restaurant.drop(['cc', 'city', 'country', 'crossStreet',
                                           'labeledLatLngs', 'neighborhood', 'id'], a:
new_df_restaurant
```

	name	categories	address	lat	lng	postalCode	sta
	Hemispheres	American	110				

0	Restaurant & Bistro	American Restaurant	Chestnut Street	43.654884	-79.385931	M5G 1R3	C
1	Victoria's Restaurant	Restaurant	37 King Street East	43.649298	-79.376431	M5C 1E9	C
2	Goldstone Noodle Restaurant 金石	Noodle House	266 Spadina Ave	43.652278	-79.398039	M5T 2E4	C
3	The Hot House Restaurant & Bar	American Restaurant	35 Church St	43.648824	-79.373702	M5E 1T3	C
4	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 Spadina Ave.	43.653866	-79.398334	M5T 2E6	C
5	New Sky Restaurant 小沙田食家	Chinese Restaurant	353 Spadina Ave.	43.655337	-79.398897	M5T 2G3	C
6	Sky Dragon Chinese Restaurant 龍翔酒樓	Dim Sum Restaurant	280 Spadina Ave.	43.652783	-79.398174	NaN	C
7	Aroma Fine Indian Restaurant	Indian Restaurant	287 King St. W	43.646463	-79.389644	M5V 1J5	C
8	Some Time BBQ Grill Restaurant 碳烤屋	Szechuan Restaurant	988 Baldwin Street	43.655874	-79.393826	NaN	C
9	360 Restaurant	Wine Bar	301 Front St W	43.642537	-79.387042	M5V 2T6	C
10	Studio Restaurant	Breakfast Spot	389 Church St.	43.661500	-79.379319	M5B	C
11	Azure Restaurant & Bar	Restaurant	225 Front St W	43.644749	-79.385113	M5V 2X3	C
12	Rol San Restaurant 龍笙棧	Dim Sum Restaurant	323 Spadina Ave.	43.654318	-79.398650	M5T 2E9	C
13	North-East Chinese Restaurant 華北美食	Chinese Restaurant	476 Dundas St.	43.653185	-79.396677	NaN	C
14	Green Tea Restaurant Downtown	Chinese Restaurant	261 Spadina Avenue. Upper level	43.652488	-79.397501	M5T 2E3	C
15	Cottage Restaurant & Lounge	Thai Restaurant	338 Jarvis St.	43.662770	-79.376894	M4Y 2G6	C
16	Victor Restaurant & Bar	Bar	30 Mercer Street	43.645634	-79.391125	M5V 1H3	C
17	Ka Chi Korean Restaurant	Korean Restaurant	8 St Andrew St	43.654307	-79.399277	M5T 1K6	C

	Restaurant	Restaurant	St.			
18	Tasty's Caribbean Restaurant & Catering	Caribbean Restaurant	405 Spadina Ave	43.656794	-79.399251	M5T 2G6	C
19	Kensington Cornerstone Restaurant	Breakfast Spot	2A Kensington Ave.	43.652803	-79.399958	M5T 2J7	C
20	Sassafraz | Cafe | Restaurant | Private Events	Event Space	100 Cumberland Street	43.670342	-79.391041	M5R 1A6	C
21	Arriba Restaurant	Restaurant	1 Blue Jays Way	43.641479	-79.389074	M5V 1J4	C
22	Sightlines Restaurant	American Restaurant	Rogers Centre	43.641635	-79.389365	NaN	C
23	Kyoto House Japanese Restaurant	Sushi Restaurant	143 Dundas St. West	43.655381	-79.385270	NaN	C
24	Osgoode Hall Restaurant	New American Restaurant	130 Queen St W	43.651979	-79.385049	M5H 2N6	Na
25	Restaurant | Adelaide	Restaurant	325 Bay St (31st floor)	43.649563	-79.380590	M5H	C

```
df_Restaurant = new_df_restaurant.dropna(axis=0, how='any', thresh=None, subset=Nor
df_Restaurant
```

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	name	categories	
0	Hemispheres Restaurant & Bistro	American Restaurant	110 Ches

1	Victoria's Restaurant	Restaurant	37 King
2	Goldstone Noodle Restaurant 金石	Noodle House	266 S
3	The Hot House Restaurant & Bar	American Restaurant	35
4	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 Sp
5	New Sky Restaurant 小沙田食家	Chinese Restaurant	353 Sp
7	Aroma Fine Indian Restaurant	Indian Restaurant	287
9	360 Restaurant	Wine Bar	301
10	Studio Restaurant	Breakfast Spot	389
11	Azure Restaurant & Bar	Restaurant	225
12	Rol San Restaurant 龍笙棧	Dim Sum Restaurant	323 Sp
14	Green Tea Restaurant Downtown	Chinese Restaurant	261 Spadina Avenue.
15	Cottage Restaurant & Lounge	Thai Restaurant	33
16	Victor Restaurant & Bar	Bar	30 Me
17	Ka Chi Korean Restaurant	Korean Restaurant	8 St
18	Tasty's Caribbean Restaurant & Catering	Caribbean Restaurant	405 S
19	Kensington Cornerstone Restaurant	Breakfast Spot	2A Kens
20	Sassafraz	Cafe	Restaurant	Private Events	Event Space	100 Cumber
21	Arriba Restaurant	Restaurant	1 Blue
25	Restaurant	Adelaide	Restaurant	325 Bay St
26	Hong Shing Chinese Restaurant	Chinese Restaurant	195 Du
27	Richtree Natural Market Restaurants	Restaurant	14 Q
30	Insomnia Restaurant and Lounge	Restaurant	563 Blo
31	Matisse Restaurant And Bar	Restaurant	9
33	Little India Restaurant	Indian Restaurant	255 Q
34	Cali Restaurant	Vietnamese Restaurant	179 Du
35	Wah Too Seafood Restaurant	Chinese Restaurant	56 (
36	Hendricks Restaurant & Bar	Restaurant	Yonge
37	Maezo Restaurant & Bar	Indian Restaurant	67 Richmond S
38	Tender Trap Restaurant	Chinese Restaurant	580 Pa
41	Maezo Restaurant	Indian Restaurant	67 Richmo
43	Spring Rolls	Japanese Restaurant in Toronto	Theme Restaurant	40 Dundas St
44	Woodlot Restaurant & Bakery	New American Restaurant	293 Palm
45	Donatello Restaurant	Italian Restaurant	
46	The Senator Restaurant	Diner	249 Vic

	name	categories	
48	Anoush Restaurant	Restaurant	250 Du

```python
neighbourhood_df = pd.concat([df_hotel, df_park, df_Restaurant], ignore_index=True
neighbourhood_df
```

	name	categories	
0	Sheraton Centre Toronto Hotel	Hotel	123 Queen

1	Chelsea Hotel	Hotel	33 Gerrard
2	One King West Hotel & Residence	Hotel	
3	Pantages Hotel & Spa	Hotel	20
4	Crew Room Eaton Chelsea Hotel	Hotel	33 Gerrard
5	VFM Test Hotel	Hotel	12
6	Cosmopolitan Toronto Centre Hotel & Spa	Hotel	8
7	Stathcona Hotel	Hotel	
8	650 Hotel	Hotel	65(
9	Be SixFifty Hotel	Hotel	65(
10	The Adelaide Hotel Toronto	Hotel	
11	Smoldering remains of the Empress Hotel	Hotel	3
12	St Regis Hotel	Hotel	
13	Suites at One King West Hotel Toronto	Hotel	1 King St W Toronto
14	DoubleTree by Hilton	Hotel	108 Che
15	Marriott Downtown at CF Toronto Eaton Centre	Hotel	52!
16	Hilton	Hotel	145 Ricl
17	Cambridge Suites Toronto	Hotel	15 Ricl
18	Op mijn hotelkamer In Toronto	Hotel	
19	Shangri-La Toronto	Hotel	188 Un
20	Queen's Park	Park	Un
21	Riverdale Park West	Park	500
22	Trinity Bellwoods Park	Park	1053 Du
23	Riverdale Park East	Park	550 Br(
24	Bellevue Square Park	Park	btwn Bellevue & A
25	Barbara Hall Park	Park	51
26	High Park	Park	1873
27	Canoe Landing Park	Park	50 F(
28	Coronation Park	Park	711 Lake Sh
29	Osgoode Hall Park	Park	130
30	Hemispheres Restaurant & Bistro	American Restaurant	110 Che
31	Victoria's Restaurant	Restaurant	37 King
32	Goldstone Noodle Restaurant 金石	Noodle House	266 S
33	The Hot House Restaurant & Bar	American Restaurant	3
34	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 S

34	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 S
35	New Sky Restaurant 小沙田食家	Chinese Restaurant	353 S
36	Aroma Fine Indian Restaurant	Indian Restaurant	287
37	360 Restaurant	Wine Bar	30
38	Studio Restaurant	Breakfast Spot	389
39	Azure Restaurant & Bar	Restaurant	225
40	Rol San Restaurant 龍笙棧	Dim Sum Restaurant	323 S
41	Green Tea Restaurant Downtown	Chinese Restaurant	261 Spadina Avenue.
42	Cottage Restaurant & Lounge	Thai Restaurant	3
43	Victor Restaurant & Bar	Bar	30 M
44	Ka Chi Korean Restaurant	Korean Restaurant	8 S
45	Tasty's Caribbean Restaurant & Catering	Caribbean Restaurant	405 S
46	Kensington Cornerstone Restaurant	Breakfast Spot	2A Kens
47	Sassafraz	Cafe	Restaurant	Private Events	Event Space	100 Cumbe
48	Arriba Restaurant	Restaurant	1 Blu
49	Restaurant	Adelaide	Restaurant	325 Bay S
50	Hong Shing Chinese Restaurant	Chinese Restaurant	195 D
51	Richtree Natural Market Restaurants	Restaurant	14
52	Insomnia Restaurant and Lounge	Restaurant	563 B
53	Matisse Restaurant And Bar	Restaurant	
54	Little India Restaurant	Indian Restaurant	255 (
55	Cali Restaurant	Vietnamese Restaurant	179 Du
56	Wah Too Seafood Restaurant	Chinese Restaurant	56
57	Hendricks Restaurant & Bar	Restaurant	Yonge
58	Maezo Restaurant & Bar	Indian Restaurant	67 Richmond
59	Tender Trap Restaurant	Chinese Restaurant	580 P
60	Maezo Restaurant	Indian Restaurant	67 Richm
61	Spring Rolls	Japanese Restaurant in Toronto	Theme Restaurant	40 Dundas S
62	Woodlot Restaurant & Bakery	New American Restaurant	293 Paln
63	Donatello Restaurant	Italian Restaurant	
64	The Senator Restaurant	Diner	249 Vi
65	Anoush Restaurant	Restaurant	250 D

```
map_toronto = folium.Map(location=[latitude, longitude], zoom_start=14)

for lat, lng, name, categories, address in zip(neighbourhood_df['lat'], neighbourho
                                                        i hh  h  df['l    tl  i hh  h  d
```

```
                                    neighbourhood_df['name'], neighbourhood_
                                        neighbourhood_df['address']):
    label = '{}, {}'.format(name, address)
    label = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
        radius=5,
        popup=label,
        color='blue',
        fill=True,
        fill_color='blue',
        fill_opacity=0.7,
        parse_html=False).add_to(map_toronto)

map_toronto
```