

# THE BATTLE OF NEIGHBOURHOODS

## Problem Background:

The Toronto is the most populous city in the Canada. It is diverse and is the financial capital of Canada. It is multicultural. It provides lot of business opportunities and business friendly environment. It has attracted many different players into the market. It is a global hub of business and commerce. The city is a major centre for banking and finance, retailing, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theatre, fashion, and the arts in the Canada.

This also means that the market is highly competitive. 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 analysed carefully. The insights derived from analysis will give good understanding of the business environment which help in strategically targeting the market. This will help in reduction of risk. And the Return on Investment will be reasonable.

The City of Canada is famous for its excellent cuisine, Art & culture and one of the best tourist locations in the world. Canada has a large domestic and foreign tourism industry. The second largest country in the world, Canada's incredible geographical variety is a significant tourist attractor. Much of the country's tourism is centred in the following (busiest) regions: Toronto, Montreal, Vancouver/Whistler, Niagara Falls, Vancouver Island, Calgary/Canadian Rockies, British Columbia's Okanagan Valley, and the national capital region Ottawa. The large cities are known for their culture, diversity, as well as the many national parks and historic sites.

## Problem Description:

The event management company must plan an event "A 7 days conference on Modern art", where delegates will be attending from all over the world. To send them an invitation letter need to provide first-hand information to delegates like restaurants, shopping centres, cuisines, parks to meet their needs of comforts. Toronto has a big network of Modern art and natural architecture, the problem here was that event management company has never had any business in Toronto.

The management company need a better rekey around event location at Toronto and a better Hotel for stay. To optimize the cost of travelling around the Toronto.

## Data:

1. Identification of Hotels around the conference venue at Toronto. This can be obtained from foursquare. Foursquare is an efficient digital location website that provides the data about numerous location data around the world.
2. Find parks around the Toronto from Foursquare
3. List of restaurants, shopping mall and cafeteria around the vicinity of Toronto.

With the complete data science analytics on the above data, it will help the event company to prepare an invitation letter mentioning suitable hotels, cuisines, museums, resting lounges to get a first-hand information for the delegates attending the conference at Toronto.

## Methodology:

Initially the data about the restaurants and hotels and all the scenic places around the Toronto need to be collected.

We collect the total hotels data within the radius of 1000 meters and the list limiting to 35 needed. This could be easily done by get command and pinging to Foursquare site. We the total

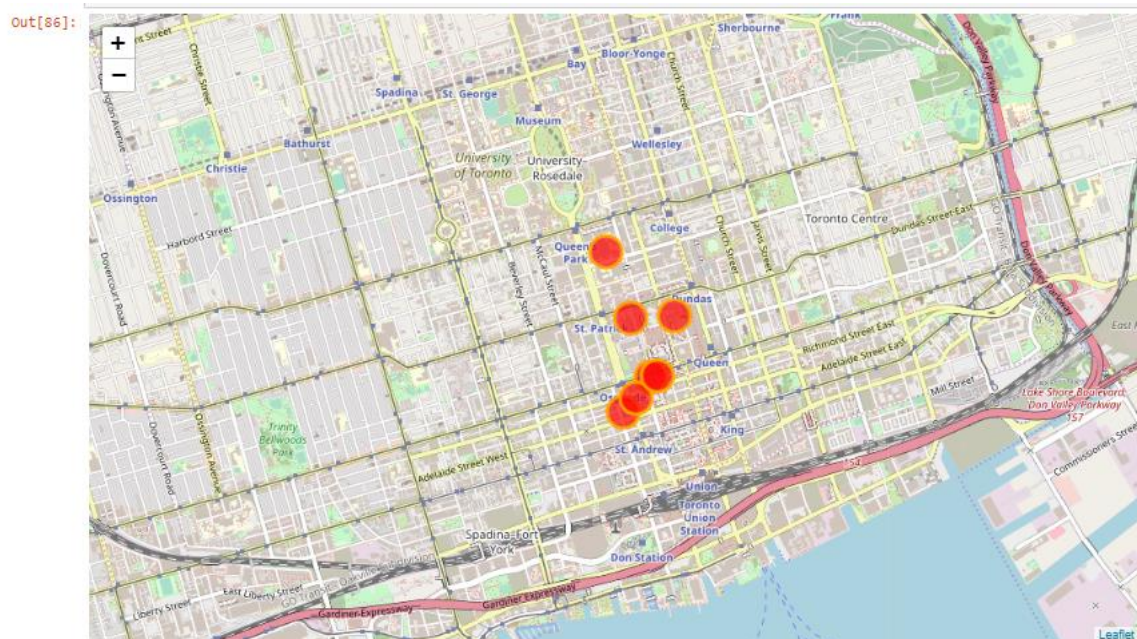
information about the **hotels**, which needed to be cleaned for better understanding by applying various cleaning techniques. The final data set will be available as.

```
In [30]: df_hotels = hotel_dataframe.drop_duplicates(subset='name', keep="first")
df_hotels
```

```
Out[30]:
```

	name	categories	address	lat	lng	postalCode	state
0	Sheraton Centre Toronto Hotel	Hotel	123 Queen Street West	43.651144	-79.384329	M5H 2M9	ON
2	DoubleTree by Hilton Hotel Toronto Downtown	Hotel	108 Chestnut Street	43.654908	-79.385942	M5G 1R3	ON
3	VFM Test Hotel	Hotel	123 Test Drive	43.658434	-79.387894	M2M 2M2	ON
9	Marriott Downtown at CF Toronto Eaton Centre	Hotel	525 Bay Street	43.654728	-79.382422	M5G 2L2	ON
10	Shangri-La Toronto	Hotel	188 University Ave.	43.649129	-79.385557	M5H 0A3	ON
11	Hilton Toronto	Hotel	145 Richmond St W	43.649946	-79.385479	M5H 2L2	ON
21	Grand Ballroom	Event Space	123 Queen St. W	43.651217	-79.383771	M5H 2M9	ON

Visually, this could be



We collect the total **parks data** within the radius of 1000 meters and the list limiting to 35 needed. This could be easily done by get command and pinging to Foursquare site. We the total information about the parks, which needed to be cleaned for better understanding by applying various cleaning techniques. The final data set will be available as.

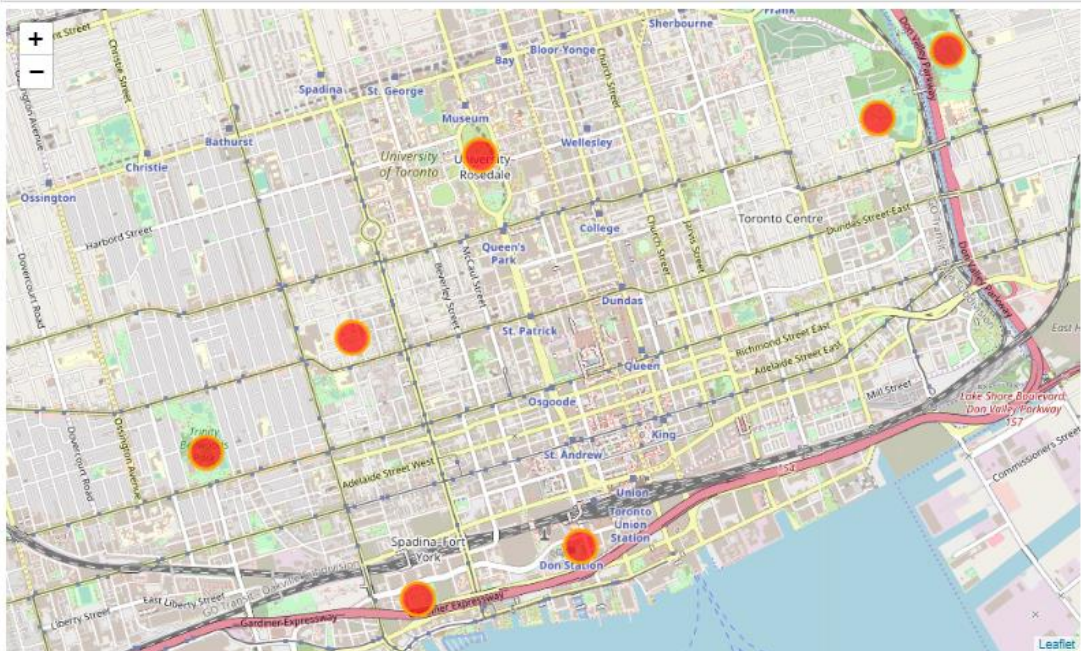
```
In [41]: df_park = clean_park_dataframe3[clean_park_dataframe3.categories == 'Park']
df_park
```

```
Out[41]:
```

	name	categories	address	lat	lng	postalCode	state
2	Trinity Bellwoods Park	Park	1053 Dundas St. W.	43.647072	-79.413756	M5H 2N2	ON
4	Bellevue Square Park	Park	btwn Bellevue & Augusta Ave.	43.653610	-79.402199	M5T 2N4	ON
8	Queen's Park	Park	University Ave.	43.663946	-79.392180	M5R 2E8	ON
12	Riverdale Park East	Park	550 Broadview Ave	43.669951	-79.355493	M4K 2P1	ON
14	High Park	Park	1873 Bloor St. W	43.646479	-79.463425	M6R 2Z3	ON
15	Canoe Landing Park	Park	50 Fort York Blvd	43.638762	-79.397067	M5V 3Z1	ON
17	Riverdale Park West	Park	500 Gerrard St.	43.668048	-79.360941	M5A 2H3	ON
18	Coronation Park	Park	711 Lake Shore Blvd. W	43.634553	-79.405403	M5V 3T7	ON
21	Roundhouse Park	Park	255 Bremner Blvd.	43.641745	-79.384279	M5V 3M9	ON

Visually, this could be

Out[82]:



We collect the total **restaurants data** within the radius of 1000 meters and the list limiting to 35 needed. This could be easily done by get command and pinging to Foursquare site. We the total information about the restaurants, which needed to be cleaned for better understanding by applying various cleaning techniques. The final data set will be available as.

```
In [46]: df_Restaurant = clean_Restaurant_dataframe2.dropna(axis=0, how='any', thresh=None, subset=None, inplace=False)
df_Restaurant
```

Out[46]:

	name	categories	address	lat	lng	postalCode	state
0	Rol San Restaurant 龍鳳樓	Dim Sum Restaurant	323 Spadina Ave.	43.654318	-79.398650	M5T 2E9	ON
1	Goldstone Noodle Restaurant 金石	Noodle House	288 Spadina Ave	43.652278	-79.398039	M5T 2E4	ON
2	Swatow Restaurant 汕頭小食家	Chinese Restaurant	309 Spadina Ave.	43.653886	-79.398334	M5T 2E6	ON
3	Hemispheres Restaurant & Bistro	American Restaurant	110 Chestnut Street	43.654884	-79.385931	M5G 1R3	ON
4	Azure Restaurant & Bar	Restaurant	225 Fmt St W	43.644749	-79.385113	M5V 2X3	ON
6	New Sky Restaurant 小沙田食家	Chinese Restaurant	353 Spadina Ave.	43.655337	-79.398897	M5T 2G3	ON
7	360 Restaurant	Wine Bar	301 Front St W	43.642537	-79.387042	M5V 2T6	ON
8	Victoria's Restaurant	Restaurant	37 King Street East	43.649298	-79.376431	M5C 1E9	ON
9	The Hot House Restaurant & Bar	American Restaurant	35 Church St	43.648824	-79.373702	M5E 1T3	ON
10	Hong Shing Chinese Restaurant	Chinese Restaurant	195 Dundas St W	43.654925	-79.387089	M5G 1C7	ON
12	The Lakeview Restaurant	Diner	1132 Dundas St. W	43.849435	-79.420390	M6J 1X2	ON
13	Victor Restaurant & Bar	Bar	30 Mercer Street	43.645634	-79.391125	M5V 1H3	ON

Visually, this could be





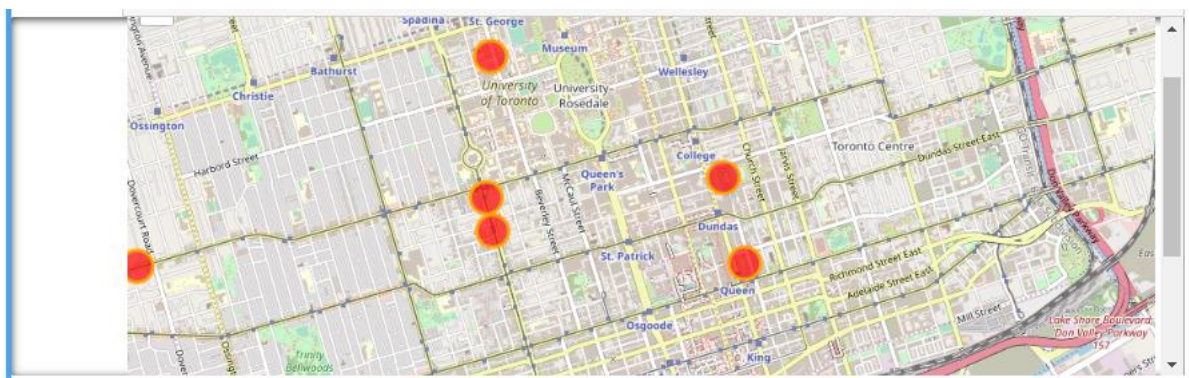
We collect the total **cafeteria data** within the radius of 1000 meters and the list limiting to 35 needed. This could be easily done by get command and pinging to Foursquare site. We the total information about the cafeteria, which needed to be cleaned for better understanding by applying various cleaning techniques. The final data set will be available as.

```
In [51]: df_Cafeteria = clean_Cafeteria_dataframe2.dropna(axis=0, how='any', thresh=None, subset=None, inplace=False)
df_Cafeteria
```

```
Out[51]:
```

	name	categories	address	lat	lng	postalCode	state
1	Stay Cafeteria 悦亮	Asian Restaurant	388 Spadina Ave	43.655454	-79.399163	M5T 2G5	ON
3	Cafeteria	Mexican Restaurant	974 College St	43.653419	-79.427678	M6H 1A5	ON
8	De La Salle College Cafeteria	College Cafeteria	131 Farnham Avenue	43.683003	-79.397815	M4V 1H7	ON
20	The Hub	College Cafeteria	350 Victoria St.	43.658585	-79.380622	M5B 2K3	ON
22	Marketeria	Restaurant	30 Bond St.	43.653585	-79.378843	M5B 1W8	ON
24	George Brown College St. James Campus	Community College	51 Dockside Dr	43.644163	-79.366375	M5A 0B6	ON
25	One Hour	Chinese Restaurant	435 Spadina Ave.	43.657399	-79.399649	M5T 2T6	ON
27	Innis College	Student Center	2 Sussex Ave	43.665556	-79.399298	M5S 1J5	ON
30	6th Floor Cafeteria 12 Concorde Place	Café	12 Concorde Place	43.721861	-79.329339	m3c 3k7	ON
33	Upstairs Cafe	Corporate Cafeteria	26 Prince Andrew Place	43.725383	-79.345481	M3C 2H4	ON
34	Eurest Dishes Cafe	Food Court	100 Wynford Drive	43.727279	-79.332272	M3C 4B4	ON

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We collect the total **shopping malls** data within the radius of 1000 meters and the list limiting to 35 needed. This could be easily done by get command and pinging to Foursquare site. We the



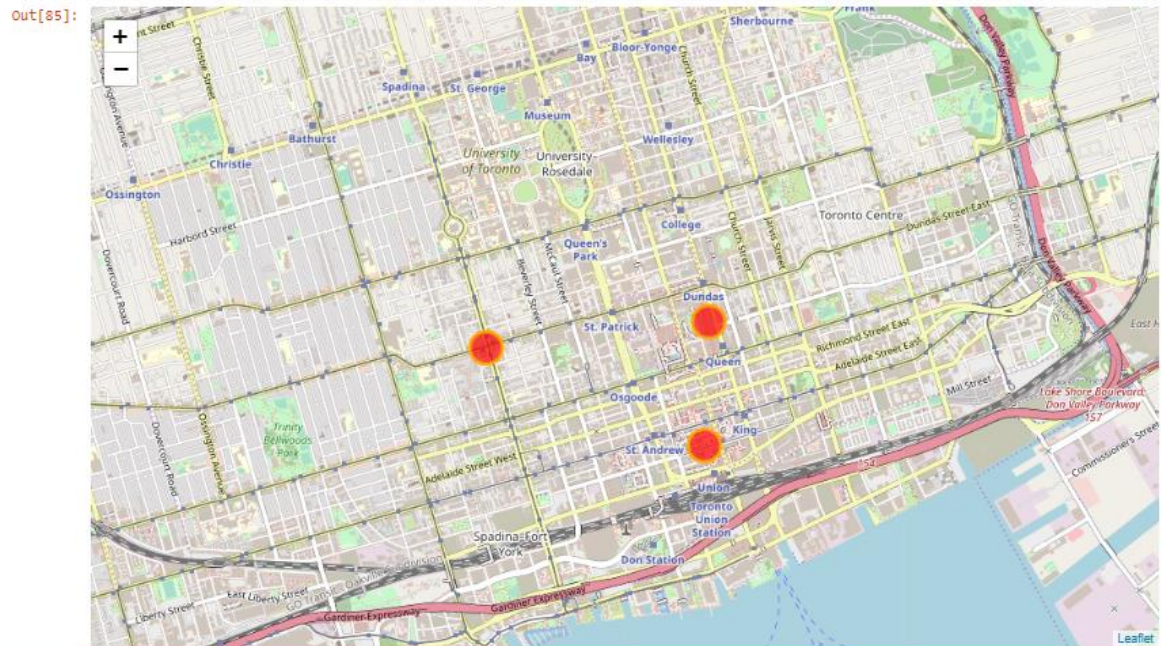
total information about the shopping malls, which needed to be cleaned for better understanding by applying various cleaning techniques. The final data set will be available as.

```
In [57]: df_Shopping = clean_Shopping_dataframe2[clean_Shopping_dataframe2.categories == 'Shopping Mall']
df_Shopping
```

```
Out[57]:
```

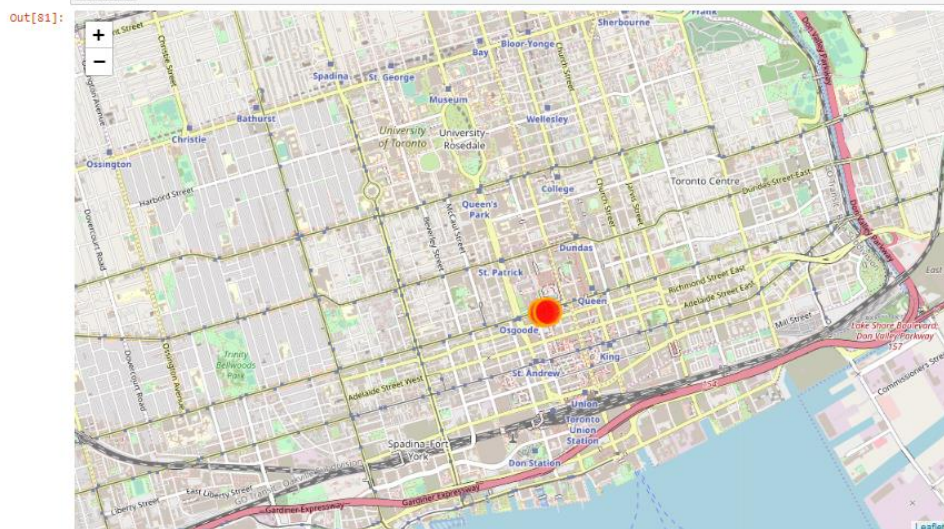
	name	categories	address	lat	lng	postalCode	state
0	Dragon City Shopping Mall 龍城	Shopping Mall	280 Spadina Ave	43.652774	-79.398222	M5T 3A5	ON
1	CF Toronto Eaton Centre	Shopping Mall	220 Yonge St	43.654265	-79.380567	M5B 2H1	ON
2	TD Centre Shopping Concourse	Shopping Mall	66 Wellington St W	43.647184	-79.380932	M5K 1A1	ON

Visually, this could be



## Result:

By applying clustering analysis on the collected data and finding the hotels that are closest to the maximum facilities are found to be **Sheraton Centre Toronto Hotel**. By booking this hotel the event management company could gain profit by quoting minimum amount for the conference.



Also, with this, event management company are in the position to provide first-hand information (restaurants, shopping malls, parks, etc) to all the participants as a customer delighter.

**Conclusion:**

The event management company with help of this analysis can optimize the cost of event as well as delight the customer experience in any unexplored location.