

Capstone Project - The Battle of Neighborhoods

For Coursera Data Science Project

BTT

May. 20, 2020

- **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 source**

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.

- **Methodology**

Majorly relied on Foursquare API to retrieve all venues of each neighborhoods, then group by each neighborhood and to count how many venues before filter top 10 most common venue types of each neighborhood.

The strategy is based on mapping the described data in section 2.0, in order to facilitate the choice of at least two candidate places for rent. The information will be consolidated in ONE MAP where one can see the details of the apartment, the cluster of venues in the neighborhood and the relative location from a subway station and from work place. A measurement tool icon will also be provided. The popups on the map items will display rent price, location and cluster of venues applicable.

- **Results:**

Hotel data results:

	name	categories	address	lat	lng	postalCode	state
0	Grand Bohemian Hotel Orlando, Autograph Collec...	Hotel	325 South Orange Avenue	28.538631	-81.378478	32801	FL
1	Doubletree Downtown Orlando Hotel Pool	Pool	60 S Ivanhoe Blvd	28.540617	-81.379039	32804	FL
2	Hotel Furniture Liquidator Orlando	Furniture / Home Store	2450 Silver Star Rd	28.538386	-81.379412	32804	FL
4	Embassy Suites by Hilton	Hotel	191 E Pine St	28.541795	-81.375506	32801	FL
5	Poseidon Spa	Spa	325 S Orange Ave	28.538757	-81.378874	32801	FL
6	Grand Bohemian Gallery	Art Gallery	325 S Orange Ave	28.538760	-81.379893	32801	FL

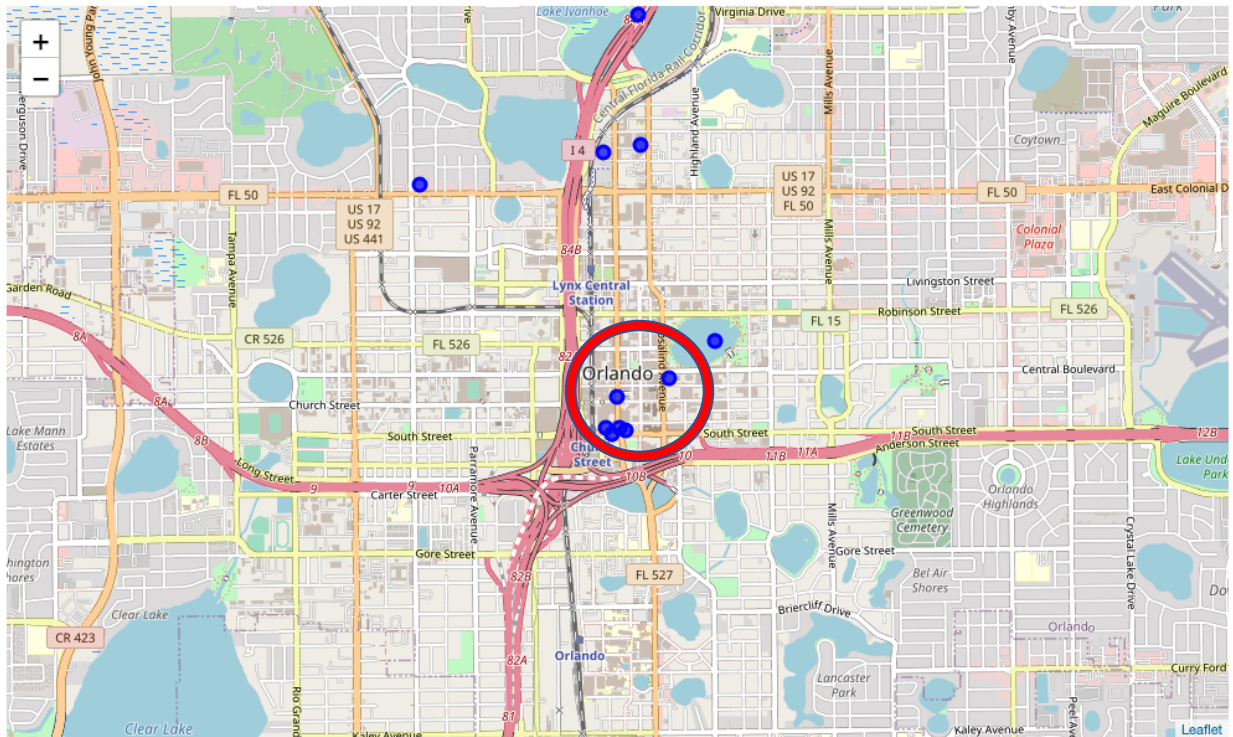
Park data results:

	name	categories	address	lat	lng	postalCode	neighborhood	state
0	Lake Eola Park	Park	195 N Rosalind Ave	28.544007	-81.372285	32801	South Eola	FL
1	Sky Park	Dog Run	55 West Condominiums	28.541142	-81.380189	32801	NaN	FL
2	Camden Thornton Park Apartments	Residential Building (Apartment / Condo)	420 E Church St	28.540135	-81.372075	32801	NaN	FL
3	Thornton Park District	Neighborhood	NaN	28.543475	-81.368526	32801	NaN	FL
4	Lake Lawsona Park	Park	1019 E Jackson Street	28.541185	-81.364080	NaN	NaN	FL
5	College Park	Neighborhood	NaN	28.571130	-81.389470	32804	NaN	FL
6	Cherokee Park	Park	525 Cherokee Drive	28.532270	-81.369589	NaN	NaN	FL
7	Allora Day Spa Thornton Park	Spa	101 S Eola Dr #104	28.540963	-81.369630	32801	NaN	FL
8	Thornton Park Second Thursday	Art Gallery	NaN	28.543733	-81.367753	32801	NaN	FL
9	The Spa of Thornton Park	Spa	23 N Summerlin Ave	28.543059	-81.368459	32801	NaN	FL
10	Park Lake	Lake	500 E Colonial Dr	28.553151	-81.372306	32803	NaN	FL
11	Thorton Park Neighborhood	Neighborhood	NaN	28.538240	-81.366706	32801	NaN	FL
12	Lake Highland Park	Park	NaN	28.561402	-81.372134	32803	NaN	FL
13	Langford Park	Park	Anderson St	28.542223	-81.357802	32801	NaN	FL
14	Park Smart	Government Building	53 W Central Blvd	28.542080	-81.380607	32801	NaN	FL
15	heratige park	Park	E Central	28.542358	-81.377815	32801	NaN	FL
16	Eola Park Realty, Inc.	Real Estate Office	121 S Orange Ave Ste 1500	28.541087	-81.378499	32801	NaN	FL
17	Lakeside at Delaney Park	Residential Building (Apartment / Condo)	1100 Delaney Ave	28.528082	-81.373536	32806	NaN	FL
18	Park Fitness	Gym	200 S Orange Ave	28.540066	-81.379216	32801	NaN	FL
19	Thornton Park Dental Arts - Jorge R. Angulo DD...	Dentist's Office	1200 E Robinson St	28.545595	-81.363826	32801	NaN	FL
20	Don't Park Here You Will Be Towed	General Entertainment	NaN	28.540989	-81.378273	32801	NaN	FL
21	City of Winter Park	City	NaN	28.591305	-81.369338	32789	NaN	Florida

Shopping store results:

	name	categories	address	lat	lng	postalCode	state
0	Shopping	Boutique	121 E Welbourne Avenue	28.596844	-81.350702	32789	FL
1	Holleanna Shopping Center	Shopping Mall	741 S Orlando Ave	28.591556	-81.365662	32789	FL
3	Southgate Shopping Center	Shopping Plaza	4649 S Orange Blossom Trl	28.496095	-81.395773	32839	FL
7	Publix	Grocery Store	741 S Orlando Ave	28.591514	-81.366182	32789	FL
9	Publix	Grocery Store	4402 Curry Ford Rd	28.521735	-81.330419	32812	FL
10	Lee Road Shopping Center	Shopping Mall	900 Lee Road	28.605573	-81.395042	32804	FL
11	Sprint - (Aloma Shopping Center)	Mobile Phone Shop	2225 Aloma Ave	28.602273	-81.322774	32792	FL
12	Publix Liquors at Aloma Shopping Center	Liquor Store	2345 Aloma Ave	28.602244	-81.321765	32792	FL
14	Publix	Grocery Store	4048 S Semoran Blvd	28.503379	-81.311609	32822	FL
17	BestBrazil Shopping	Electronics Store	1233 Sand Lake Rd #8	28.450663	-81.394194	32809	FL
18	Publix	Grocery Store	4606 S Kirkman Rd	28.495325	-81.460852	32811	FL
20	Rio Pinar Plaza	Miscellaneous Shop	515 S Chickasaw Trl	28.536960	-81.275582	32825	FL
21	Unigold Shopping Center	Shopping Plaza	7530-7762 University Blvd	28.596066	-81.285177	32792	FL
23	Publix	Grocery Store	2295 Aloma Ave	28.602325	-81.322011	32792	FL
24	Park Avenue	Shopping Plaza	Park Ave	28.597262	-81.350993	32789	FL
25	Orlando International Premium Outlets	Outlet Mall	4951 International Dr	28.474671	-81.451529	32819	FL
26	McDonald's	Fast Food Restaurant	4066 S Semoran Blvd	28.503155	-81.310804	32822	FL

Final map results:



	name	categories	address	lat	lng	postalCode	state
0	Shopping	Boutique	121 E Welbourne Avenue	28.596844	-81.350702	32789	FL
1	Hollieanna Shopping Center	Shopping Mall	741 S Orlando Ave	28.591556	-81.365662	32789	FL
2	Shopping!	Eastern European Restaurant	NaN	28.598329	-81.288301	NaN	FL
3	Southgate Shopping Center	Shopping Plaza	4649 S Orange Blossom Trl	28.496095	-81.395773	32839	FL
4	Shopping Aricanduva	Shopping Mall	NaN	28.485120	-81.431873	NaN	FL
5	washington shores shopping plaza	Miscellaneous Shop	NaN	28.538864	-81.416622	32805	FL
6	Orange Blossom Trial Shopping Center Link Supe...	Bus Line	NaN	28.496820	-81.397034	NaN	FL
7	Publix	Grocery Store	741 S Orlando Ave	28.591514	-81.366182	32789	FL
8	Aloma Shopping Center	Miscellaneous Shop	NaN	28.601705	-81.322544	32792	FL
9	Publix	Grocery Store	4402 Curry Ford Rd	28.521735	-81.330419	32812	FL
10	Lee Road Shopping Center	Shopping Mall	900 Lee Road	28.605573	-81.395042	32804	FL
11	Sprint - (Aloma Shopping Center)	Mobile Phone Shop	2225 Aloma Ave	28.602273	-81.322774	32792	FL
12	Publix Liquors at Aloma Shopping Center	Liquor Store	2345 Aloma Ave	28.602244	-81.321765	32792	FL
13	Sun Plaza Shopping Center	Miscellaneous Shop	NaN	28.552476	-81.469364	NaN	FL
14	Publix	Grocery Store	4048 S Semoran Blvd	28.503379	-81.311609	32822	FL
15	Food Shopping :-)	Deli / Bodega	NaN	28.488875	-81.302877	32822	FL
16	Life Love Shopping	General Entertainment	NaN	28.596627	-81.302517	NaN	FL
17	BestBrazil Shopping	Electronics Store	1233 Sand Lake Rd #8	28.450663	-81.394194	32809	FL
18	Publix	Grocery Store	4606 S Kirkman Rd	28.495325	-81.460852	32811	FL
19	Highland Lakes Shopping Center	Shopping Mall	NaN	28.552661	-81.480753	NaN	Florida
20	Rio Pinar Plaza	Miscellaneous Shop	515 S Chickasaw Trl	28.536960	-81.275582	32825	FL
21	Unigold Shopping Center	Shopping Plaza	7530-7762 University Blvd	28.596066	-81.285177	32792	FL
22	Best Pro Shopping	Department Store	NaN	28.465357	-81.455043	32819	FL
23	Publix	Grocery Store	2295 Aloma Ave	28.602325	-81.322011	32792	FL
24	Park Avenue	Shopping Plaza	Park Ave	28.597262	-81.350993	32789	FL
25	Orlando International Premium Outlets	Outlet Mall	4951 International Dr	28.474671	-81.451529	32819	FL
26	McDonald's	Fast Food Restaurant	4066 S Semoran Blvd	28.503155	-81.310804	32822	FL

- **Discussion:**

Data visualization need different support techniques and they are helping people to go further understanding of data analysis.

To get a detailed data analyzing results, we should do data clean to meet the specific requirements for each dataset.

There are still limitation in this data analysis process, further research on this should define the required information to each even's requirement so that to select the optimal one.

- **Conclusion**

After clustering the various information of Orlando, I would like to arrange the even in the central of Orlando next to the highway exit and the airport (in the red circle). Since this area including every place, I need to support various activities like shopping, eating and residence.

