Weekend Recommendation System

Introduction/Business problem:

Every week, we spend tow days or one day at least as a weekend. Sometimes, we feel confused about where to spend this weekend, or where should I go. Planning a good weekend will help people feel happier and better. We will create and application will recommend the users with some places where they can have fun and enjoy their times. The target audience, mostly everyone above the age of 18 years they can use the app to find places to visit in their weekends.

Data:

The data will be acquired from Foursquare.com depending on the customer location. We will show the users a map with every place they can visit and have a good time around their place.

The foursquare data will consist of many categories and we will only extract the venues, their names, location, category and category id.

We will determine the user location and get all cities and places around the user, for this purpose, there is a readymade dataset of Canada neighborhoods as an example.

The data includes the names of neighborhoods and their postal codes.

Readymade Dataset to simulate the user neighborhoods

	postal_code	borough	neighbourhood	lati	long
0	M3A	North York	Parkwoods	43.753259	-79.329656
1	M4A	North York	Victoria Village	43.725882	-79.315572
2	M5A	Downtown Toronto	Harbourfront	43.654260	-79.360636
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.718518	-79.464763
4	M7A	Downtown Toronto	Queen's Park	43.662301	-79.389494

The Data Acquired from the Foursquare API

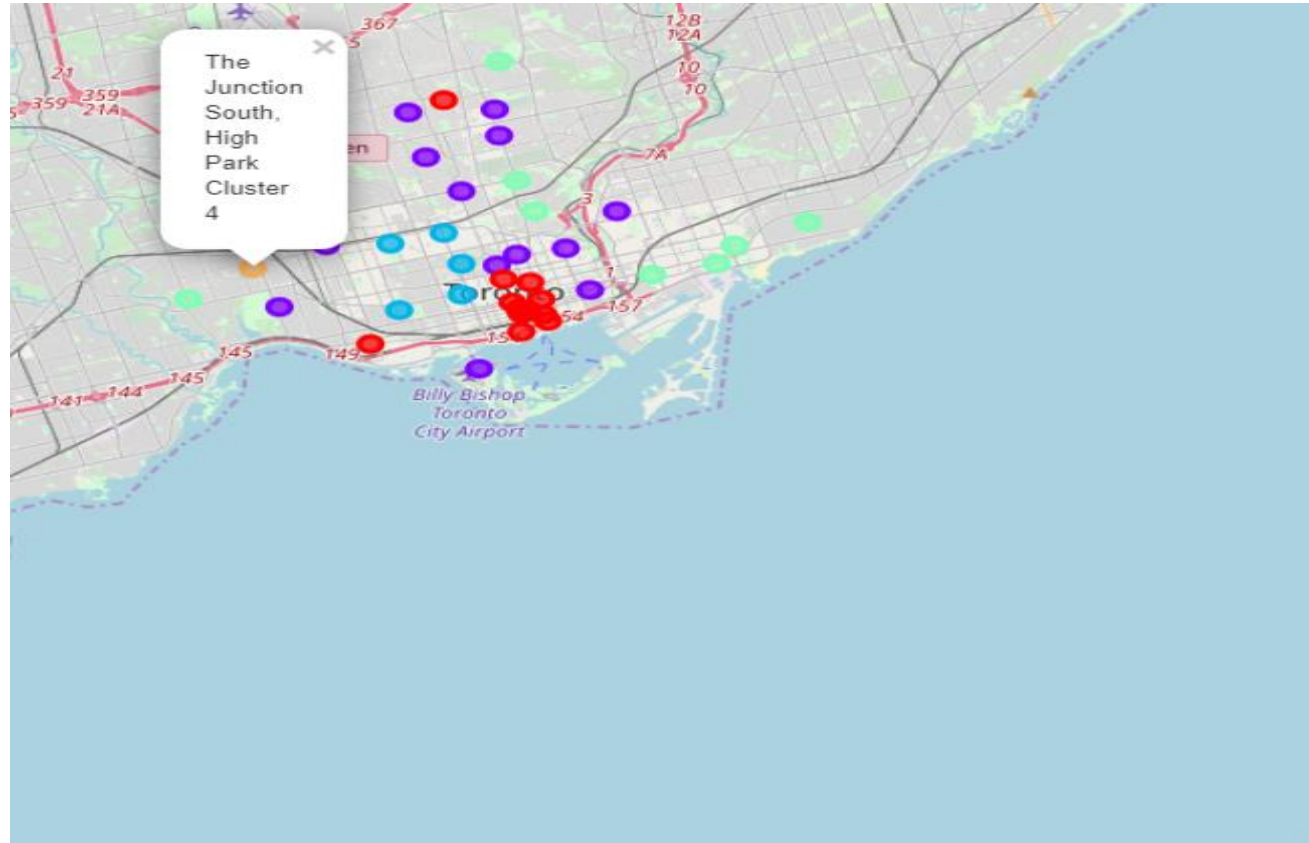|	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	Venue Category ID
0	Harbourfront	43.654260	-79.360636	Roselle Desserts	43.653447	-79.362017	Bakery	4bf58dd8d48988d16a941735
1	Harbourfront	43.654260	-79.360636	Tandem Coffee	43.653559	-79.361809	Coffee Shop	4bf58dd8d48988d1e0931735
2	Harbourfront	43.654260	-79.360636	Cooper Koo Family YMCA	43.653191	-79.357947	Gym / Fitness Center	4bf58dd8d48988d175941735
3	Harbourfront	43.654260	-79.360636	Impact Kitchen	43.656369	-79.356980	Restaurant	4bf58dd8d48988d1c4941735
4	Harbourfront	43.654260	-79.360636	The Distillery Historic District	43.650244	-79.359323	Historic Site	4deefb944765f83613cdba6e
...		...	...	...	...	...	...	...
3750	Business Reply Mail Processing Centre 969 Eastern	43.662744	-79.321558	Fairmount Park	43.675286	-79.315745	Baseball Field	4bf58dd8d48988d1e8941735
3751	Business Reply Mail Processing Centre 969 Eastern	43.662744	-79.321558	Sushi Marche	43.662033	-79.335626	Sushi Restaurant	4bf58dd8d48988d1d2941735
3752	Business Reply Mail Processing Centre 969 Eastern	43.662744	-79.321558	Remarkable Bean Leslieville	43.662010	-79.335709	Café	4bf58dd8d48988d16d941735
3753	Business Reply Mail Processing Centre 969 Eastern	43.662744	-79.321558	New Town Restaurant	43.672880	-79.319488	Diner	4bf58dd8d48988d147941735
3754	Business Reply Mail Processing Centre 969 Eastern	43.662744	-79.321558	Projection Booth	43.668890	-79.337020	Movie Theater	4bf58dd8d48988d17f941735

3755 rows × 8 columns

Methodology:

We will obtain the data based on neighborhoods of the user current location from four squares, we filter data based on category to select only places suitable for having good times at weekends and holidays.

After extracting the suitable data, we will cluster them using K-means to provide them in groups for the user, so the user can choose something suitable for him/her. Such as clubs/ theaters/ gaming cafes and so on.
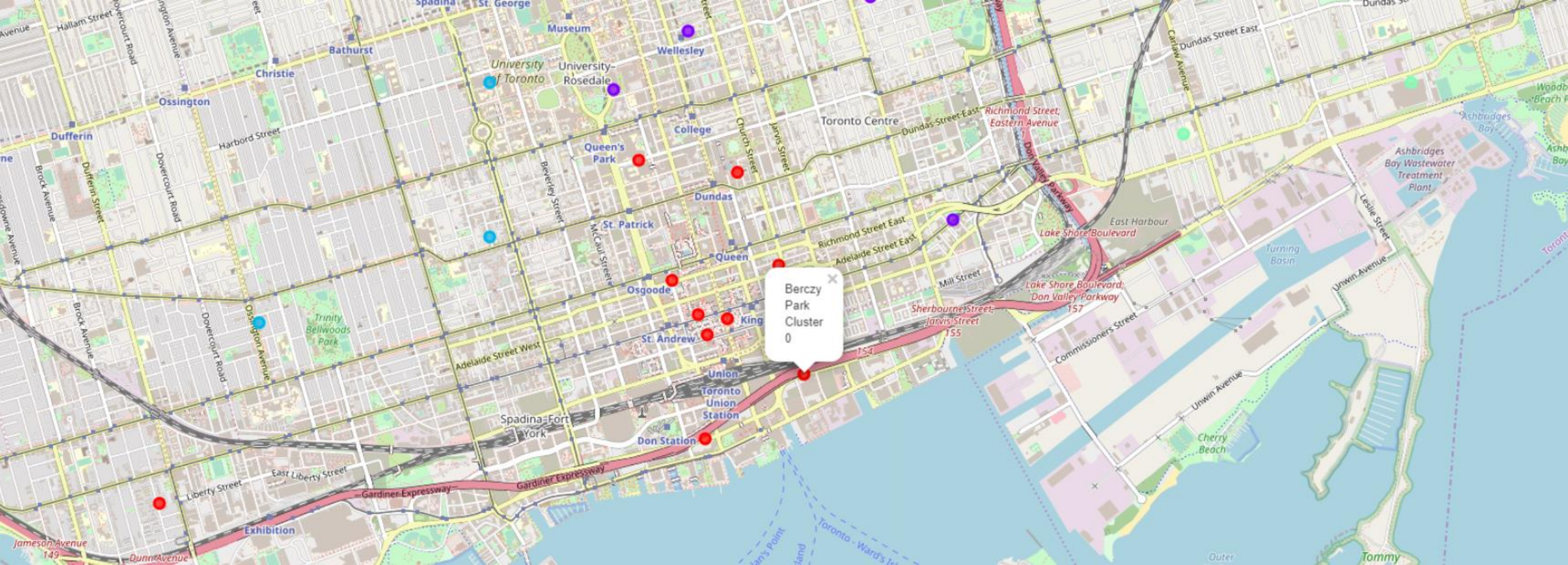
Results:

The application gets the information based on the user current location successfully and provides a great tool for the user to plan his/her weekends locally.

More on Results:

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Discussion:

The App may fail to get the required information if the city neighborhoods are too limited or have not been added on Foursquare database yet.

Conclusion:

Finally, this app is considered the initial core for a greater project that can be customized as per the user range, age, and desired places that he/she likes to spend time based on their hobbies for example.