The Battle of Arenas

Introduction

My report is for those who are planning to visit New York and want to make a day trip from Manhattan to Prudencial center or Barclays center to see NHL match, visit a restaurant and grab a drink after the game.
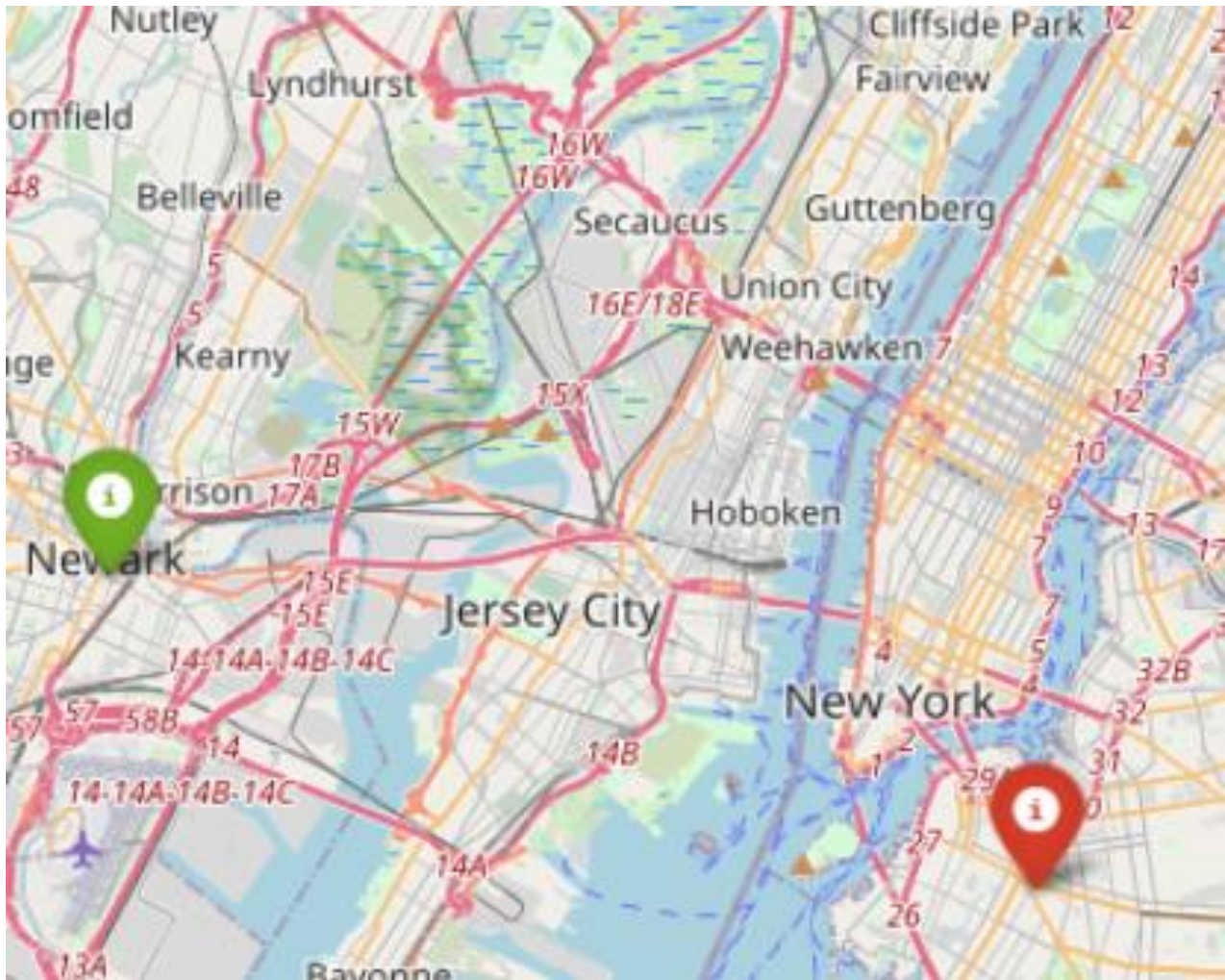
New York is a big city there is much to do, but also surroundings are offering many interesting options. This example uses data to gather information about these surrounding activities for these two places that are alternatives for Madison square garden that is Manhattans top 1 arena to visit.

Data Acquisition

1. New York city map from geolocator

2. Using Geopy to get geological location by address.

3. Using Foursquare API to get the restaurant venue ratings near both locations

4. Using Foursquare API to get the bar venue ratings near both locations

5. Using pandas data science methods to make analysis for these places.

Methodology

1. Scrape a map of New York
2. Add both locations to that map (green Prudencial Center and red Barclays Center)

3. Explore the restaurants from both locations using Foursquare API. The limit is set as 100 venues, and the radius is set as 500 meters for both locations from their given latitude and longitude. As the header of the dataset shows below, the dataset contains id, rating, name, location Latitude, location Longitude and address.
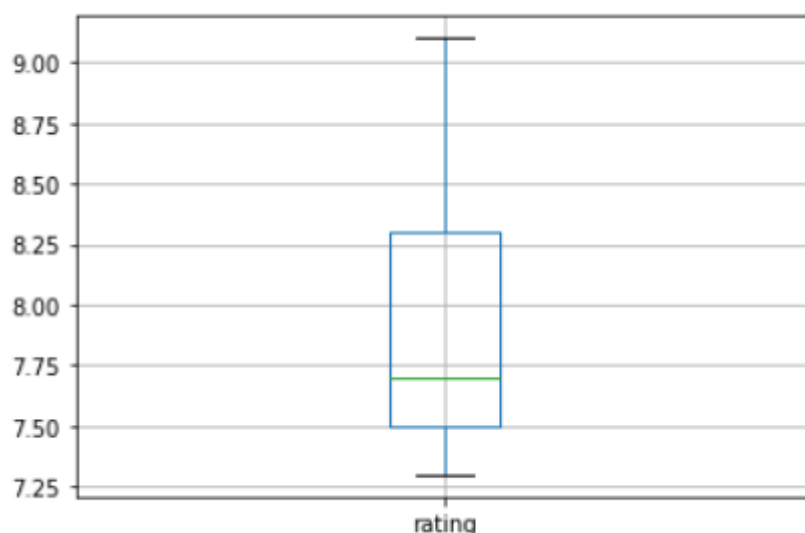
	id	rating	name	location.lat	location.lng	location.address
0	4d712b241529a143144a97a0	7.3	Mulberry Restaurant and Pizzeria	40.729992	-74.171828	258 Mulberry St
1	4c4a30af959220a13978c30d	9.1	Delicias De Minas Restaurante	40.726899	-74.168288	168 McWhorter St
2	52d1ca9f498e318bf8c64ddf	7.5	La Rouge Restaurant & Lounge	40.730157	-74.175158	972 Broad St
3	4bd0801ccaff9521b8eccef0	7.2	Dario's Restaurant	40.737399	-74.172631	20 Academy St
4	4ba5443af964a520c3f338e3	6.7	Prudential Center Acela Club	40.733814	-74.170687	165 Mulberry St
5	4baeecc3f964a5202ce23be3	5.6	Subway	40.737189	-74.171077	730 Broad St
6	4ba39fd0f964a520304d38e3	7.7	Francesca's Pizza & Pasta	40.729695	-74.166778	81 McWhorter St.
7	4bdb5b0963c5c9b6cc8b2768	8.3	Chateau of Spain	40.731160	-74.173880	11 Franklin St

4. Explore the bars from both locations using Foursquare API. The limit is set as 100 venues, and the radius is set as 500 meters for both locations from their given latitude and longitude. As the header of the

dataset shows below, the dataset contains id, rating, name, location Latitude, location Longitude and address.

	id	rating	name	location.lat	location.lng	location.address
0	43c936c3f964a520992d1fe3	6.6	Burrito Bar & Kitchen	40.678302	-73.973275	307 Flatbush Ave
1	4be326bef07b0f47e039f743	5.2	Applebee's Grill + Bar	40.684431	-73.977509	139 Flatbush Ave. Level 2
2	5e3360281015ac00083969f9	6.8	Bar Goto Niban	40.680963	-73.975542	474 Bergen St
3	555fe4ab498e0bddb5ed061c	7.4	BK9 Kitchen & Bar	40.681159	-73.977271	62 5th Ave
4	506f5cfee4b017acd4c68974	6.9	Honda Club at Barclays Center	40.682605	-73.975159	Barclays Center
5	46cb0dedf964a5202a4a1fe3	7.4	Alchemy Restaurant & Bar	40.681344	-73.977200	56 5th Ave
6	4b992b04f964a520726635e3	8.8	Barclays Center	40.682970	-73.975906	620 Atlantic Ave
7	57392d78498e7fdb53b33ec1	7.5	The Armory Bar	40.682157	-73.979693	67 4th Ave
8	50a01ab7e4b09c89238763c4	7.9	Brooklyn Farmacy at Barclay's Center	40.683059	-73.975781	NaN
9	5095b31be4b0a7ac715f2a6d	6.2	L&B Spumoni Gardens at the Barclays Center	40.683093	-73.975888	NaN
10	50afd3a8e0e2a8219818316b	6.4	Elbow Room Barclays	40.683076	-73.975760	614 Atlantic Ave
11	507ca450e4b086cfd714d060	7.4	The Vault at Barclays Center	40.683013	-73.975876	620 Atlantic Ave
12	4bf724bb4a67c9280c2a23cf	5.8	El Viejo Yayo	40.681931	-73.976725	36 5th Ave
13	49ce7cb3f964a520495a1fe3	6.7	Buffalo Wild Wings	40.684767	-73.977596	139 Flatbush Ave
14	4ca6342076d3a093b22fff6a	7.4	Mo's Fort Greene	40.687087	-73.974687	80 Lafayette Ave
15	51e6936e498e2ab4d2768ee6	7.7	Barclays Center Farmers Market	40.684161	-73.977766	NaN
16	45548f85f964a5200f3d1fe3	6.5	Mullane's	40.687162	-73.975701	71 Lafayette Ave
17	4af59b37f964a5203efa21e3	8.7	Brooklyn Crepe & Juice	40.679066	-73.974075	274 Flatbush Ave
18	5a984f7a3abcaf201206217f	6.0	Dickey's Barbecue Pit	40.681623	-73.975862	196 Flatbush Ave Ste A
19	4b11ced7f964a5201b8523e3	7.7	Diamante's Brooklyn Cigar Lounge	40.686289	-73.973528	108 S Oxford St
20	4ebb2e7102d5a3de7915986c	7.2	Uncle Barry's	40.681225	-73.977175	58 5th Ave

5. Do data analysis with python. First we rank top5 restaurants and bars from both places then we draw a boxplot to visualize them (example from restaurants near Prudencial Center).

Conclusions

In this study I studied difference between 2 different locations and merged data together from Foursquare API and Geopy coordinates. I had a assumption that Barclays Center in Brooklyn has more "Fine dining" to offer than Prudencial Center in Newark, but the data shows other. Brooklyn has more restaurants and bars to offer than Newark, but the ratings given by customers are a bit higher near Newark. What this study doesn't show is how many customer reviews places have got in Foursquare so that could be good place to continue this study further.

Future Directions

To take this study to next level there is couple interests that could be studied. First get count of reviews from Foursquare for all the places in the study. Then sort them and exclude places that have fever than 5 reviews for example. Then the remaining places could be drawn to map to shown locations for viewer.