EXPLORE FEASIBILITY OF MOVING WITHIN THE SAME CITY DHAKA, BANGLADESH

INTRODUCTION

I am Shah Nawaj Rahman,

A data enthusiast residing in Mirpur, Dhaka, Bangladesh. I enjoy many amenities and venues in the area, such as various international cuisine restaurants, cafes, food shops and entertainment. I have been offered a great opportunity to work for a one of the top Retail company which is located in another part of the city. Banani, Dhaka, Bangladesh. I am very excited and I want to use this opportunity to practice my learnings in Coursera in order to answer relevant questions arisen. The key question is : How can I find a convenient and enjoyable place similar to my current location Mirpur, within Banani Area?

OBJECTIVES

Certainly, I can use available local informative websites, apps and Google but the idea is to use and apply myself the learned tools during the course. In order to make a comparison and evaluation of the options in Banani, I must set some basis, therefore the house in Banani must meet the following demands:

- desired location is near bus station and within 1.0 km radius.
- top ammenities in the Banani neighborhood shall be similar to current residence.
- desirable to have venues such as coffee shops, restaurants, gym and food shops.
- as a reference, I have included a map of venues near Mirpur, Dhaka.

OBJECTIVES

Business Problem:
The challenge is to find a suitable apartment for rent in Banani, Dhaka; that complies with the demands on location, price and venues. The data required to resolve this challenge is described in the Data Section below.

Interested Audience
I believe this is a relevant challenge with valid questions for anyone moving to other city or to a different part of the same city. The same methodology can be applied in accordance to demands as applicable. This case is also applicable for anyone interested in exploring starting or locating a new business in any city. Lastly, it can also serve as a good practical exercise to develop Data Science skills.

DATA

The following data is required to answer the issues of the problem:

- List of neighborhood in Banani with geo data (latitud and longitud)
- List of Bus stations in Banani with their address location
- List of house for rent in Banani area with their addresses and price
- Preferably, a list of apartment for rent with additional information, such as price, address, area, room, etc
- Venues for each Banani neighborhood (than can be clustered)

APPROACH

The data will be used as follows:

- Use Foursquare and geopy data to map top 10 venues for all Banani neighborhoods and clustered in groups (as per Course LAB)
- Use foursquare and geopy data to map the location of bus stations , separately and on top of the above clustered map in order to be able to identify the venues and amenities
- create a map that depicts, for instance, the average rental price, around a radios of 1.0 km around each bus station - or a similar metrics.
- Addresses from rental locations will be converted to geodata(lat, long) using Geopy-distance and Nominatim.
- Data will be searched in open data sources if available, from real estate sites if open to reading, and libraries.

APPROACH

The processing of these DATA will allow to answer the key questions to make a decision:

- what is the cost of rent around a 1.0 km radius from each bus station?
- what is the area of Banani with best rental pricing that meets criteria established?
- What is the distance from work place (Banani Commercial Area) and the tentative future home?
- What are the venues of the two best places to live? How the prices compare?
- How venues distribute among Banani neighborhoods and around bus stations?
- Are there tradeoffs between size and price and location?
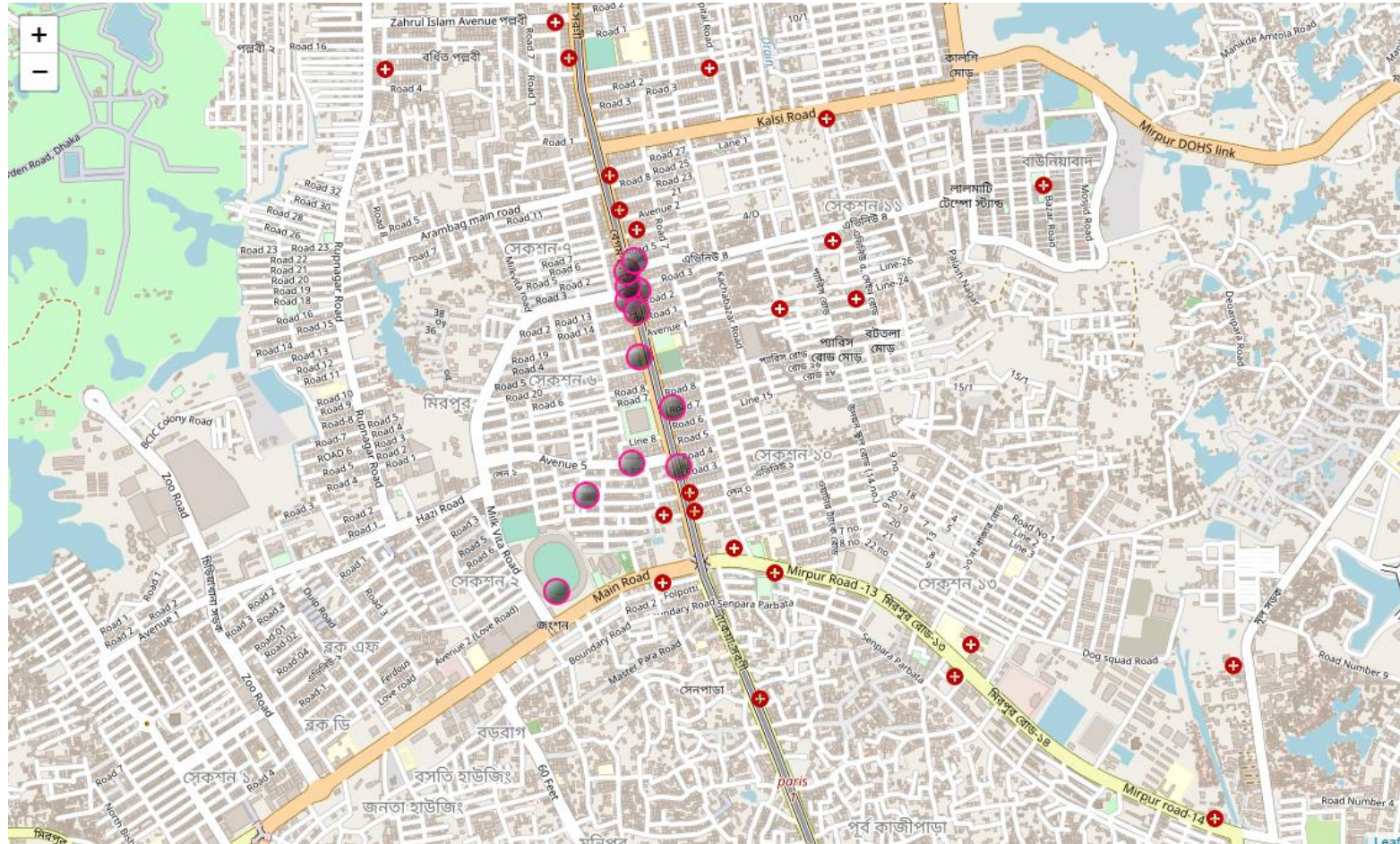- Any other interesting statistical data findings of the real estate and overall data.

RESULTS

Venues around current residence in Mirpur

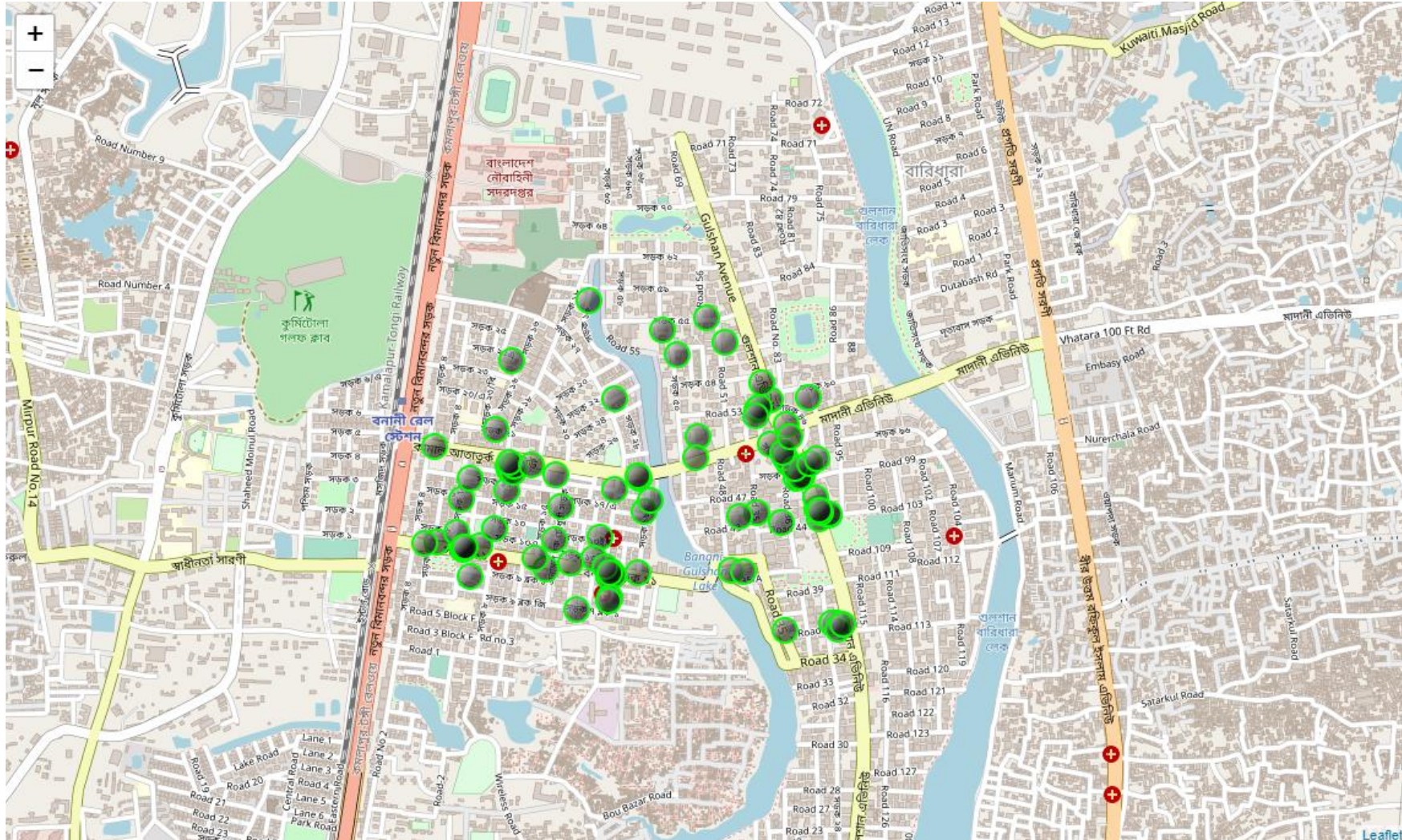|	name	categories	lat	lng
0	Sher-e-Bangla National Cricket Stadium	Cricket Ground	23.806196	90.363579
1	Original 10 Mirpur	Other Great Outdoors	23.810282	90.366177
2	Rabbani Hotel and Restaurant	Restaurant	23.815782	90.366411
3	Selim's Special Tea	Tea Room	23.809275	90.364614
4	Xinxian Resturant	Chinese Restaurant	23.813651	90.366475
5	Sigree	Buffet	23.815460	90.366050
6	Mirpur 11 Bus Stand	Bus Station	23.815123	90.366382
7	Yantai Chinese & Thai Restaurant	Chinese Restaurant	23.815895	90.366075
8	Banolata Food Palace	Fast Food Restaurant	23.816366	90.366020
9	Delicious Food	Restaurant	23.812028	90.367629
10	Yummy Yummy	Fast Food Restaurant	23.810151	90.367836
11	KFC, Mirpur 11	Fried Chicken Joint	23.816734	90.366295

Map of Mirpur with venues near my residence place

Venues around my possible future locations in Banani

	name	categories	lat	lng
0	Columbus coffee	Coffee Shop	23.790160	90.408098
1	Lucknow	Indian Restaurant	23.793301	90.409157
2	Gulshan Club Ltd	Nightclub	23.794640	90.411229
3	Quesadilla La Mexicana Grill	Mexican Restaurant	23.790377	90.408055
4	Artisan	Clothing Store	23.793981	90.411140
5	The Manhattan FISH MARKET	Seafood Restaurant	23.793728	90.404550
6	Movenpick	Ice Cream Shop	23.792333	90.415373
7	Time Out	Asian Restaurant	23.792268	90.409307
8	Taste	Café	23.793325	90.414650
9	Tree House	Steakhouse	23.791418	90.407776
10	Fools' Diner	Japanese Restaurant	23.790764	90.407547
11	Bitter Sweet	Café	23.795532	90.413268
12	Floor 6	Asian Restaurant	23.791281	90.402090
13	Handi Restaurant	Indian Restaurant	23.792682	90.415346
14	Nando's Banani	Portuguese Restaurant	23.790313	90.408153
15	Westin Dhaka Executive Club Lounge	Lounge	23.793772	90.414412

Map of my possible future locations in Banani with venues near residence place

CONCLUSION

From map it seems Banani has better venues than Mirpur. If house rent is alright, I can proceed with the moving.

THANK YOU