



NEIGHBORHOOD INSIGHT: Qurtubah

Urban data analysis

Topic

This project examines Qurtubah, a neighborhood in Riyadh city according to the following measures: destinations, diversity, density, family friendliness.

Target Audience

if done on a bigger-scale to include all neighborhoods in the city, such project will benefit :

1

Someone who's moving to Riyadh and looking for a perfect neighborhood for their needs.

2

Someone who's looking for a place to buy or rent.



3

Business owners looking to expand their business to a new location.

4

A bored explorer!

Project Questions



- **How diverse are the destinations in Qurtubah?**
- **What are the best destinations?**
- **How is the neighborhood family friendly?**
- **How is rent affected in comparison to other neighborhoods?**

Data: Overview

data was collected from multiple sources due to accessibility limitations. the collected data included the following neighborhood amenities:

schools, nurseries, restaurants, cafes, malls, pharmacies, clinics, parks, grocery stores, clothing stores, tailors, salons and barber shops, gyms, and mosques.



Data: Description

col	Description	Type
title	name of location	string
category	type of place	string
dist	district	string
lat	Latitude	float
lng	longitude	float
rating	rating retrieved from google places	float
num_rating	number of ratings the place recived	int

steps

Collection

Collecting the data using apify, octoparse, and Apis.

Cleaning

Removing nulls, fixing formats, editing categories..etc.

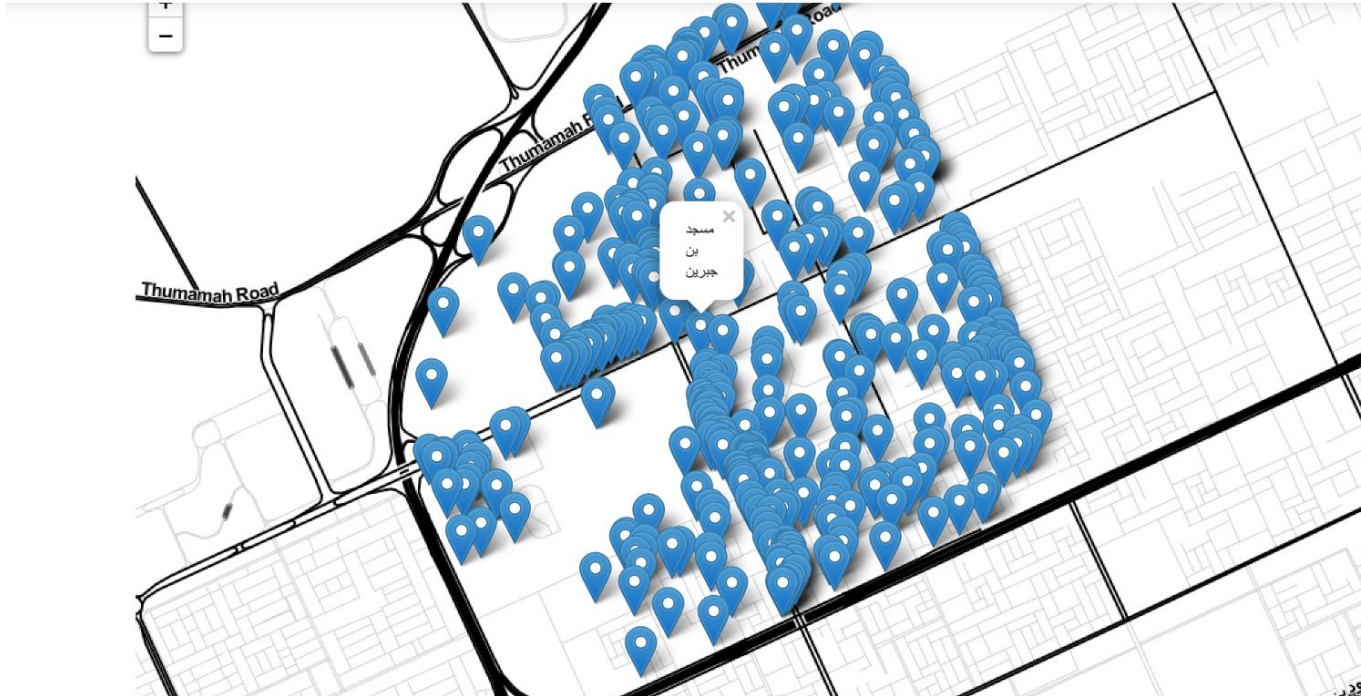
EDA

Analysing the data and plotting findings

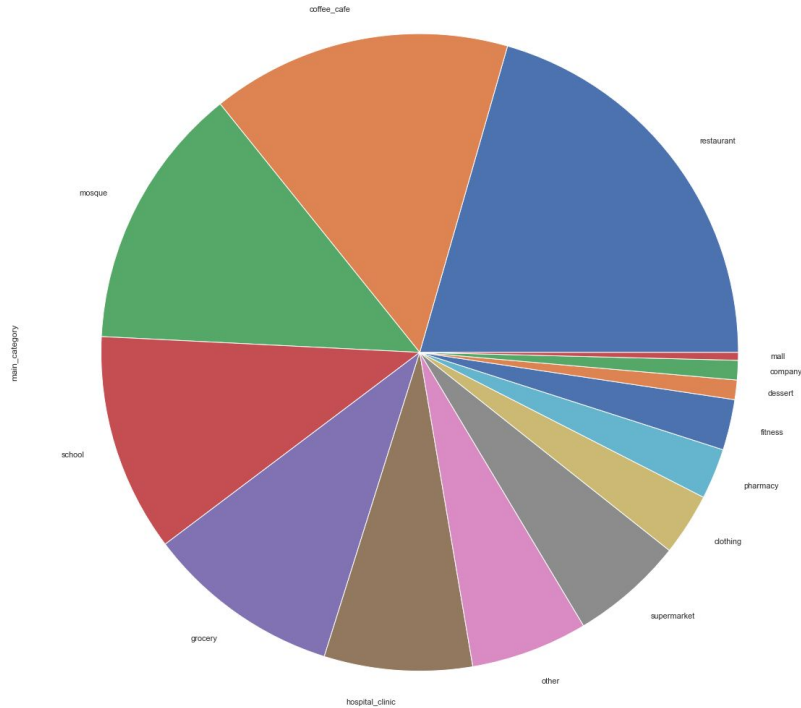
Cleaning

- Calculating distance between Qurtubah's center and places using lat and lng, to remove places that are out of range.
- Removing minus sign from review counts.
- Removing places where dist value is not or does not include Qurtubah.
- Removing duplicates.
- Unify formats.
- Renaming arabic categories.
- Creating new columns for distance and main_category.

EDA : How diverse are the destinations in Qurtubah?



EDA : How diverse are the destinations in Qurtubah?



14

There are 14 main categories in qurtubah.

82

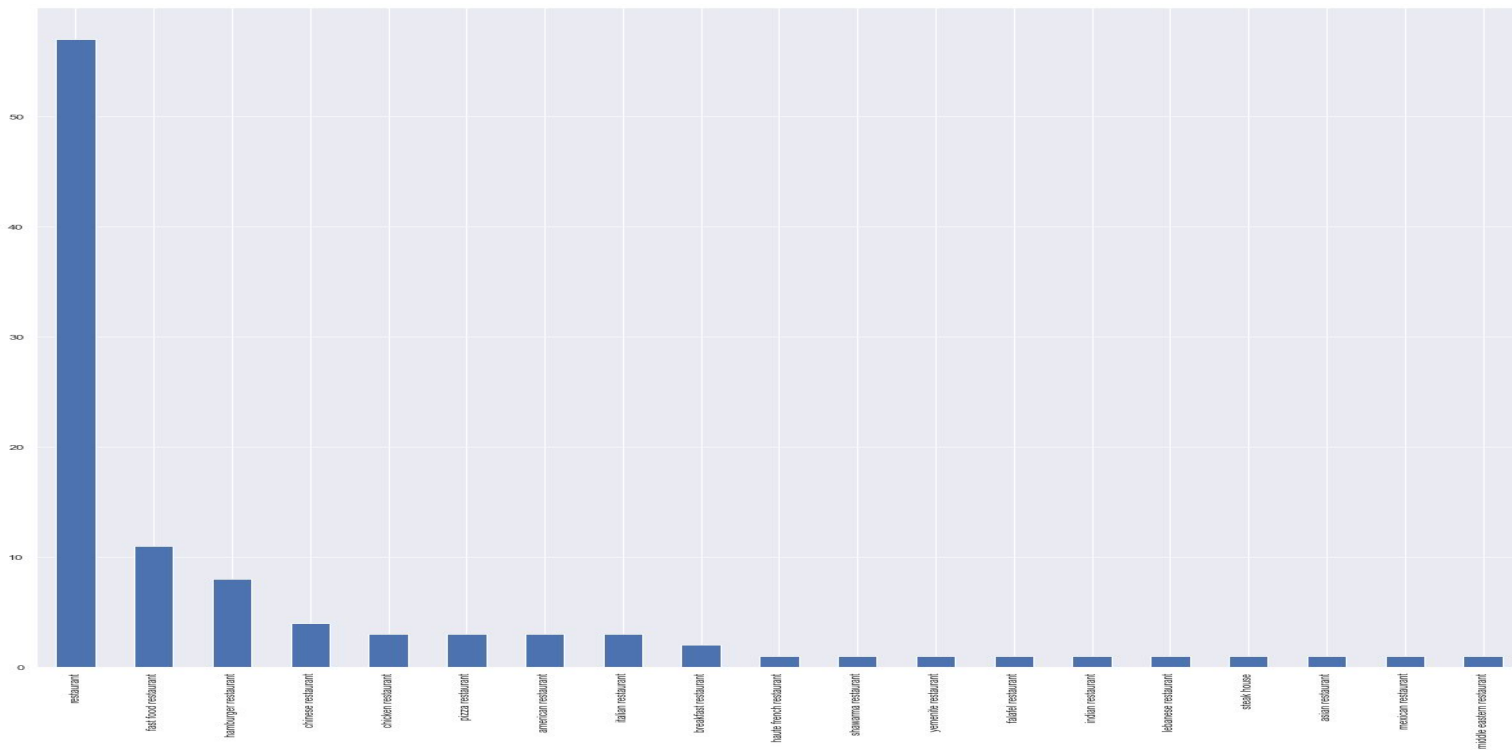
And 82 sub-categories.

EDA : How diverse are the destinations in Qurtubah?

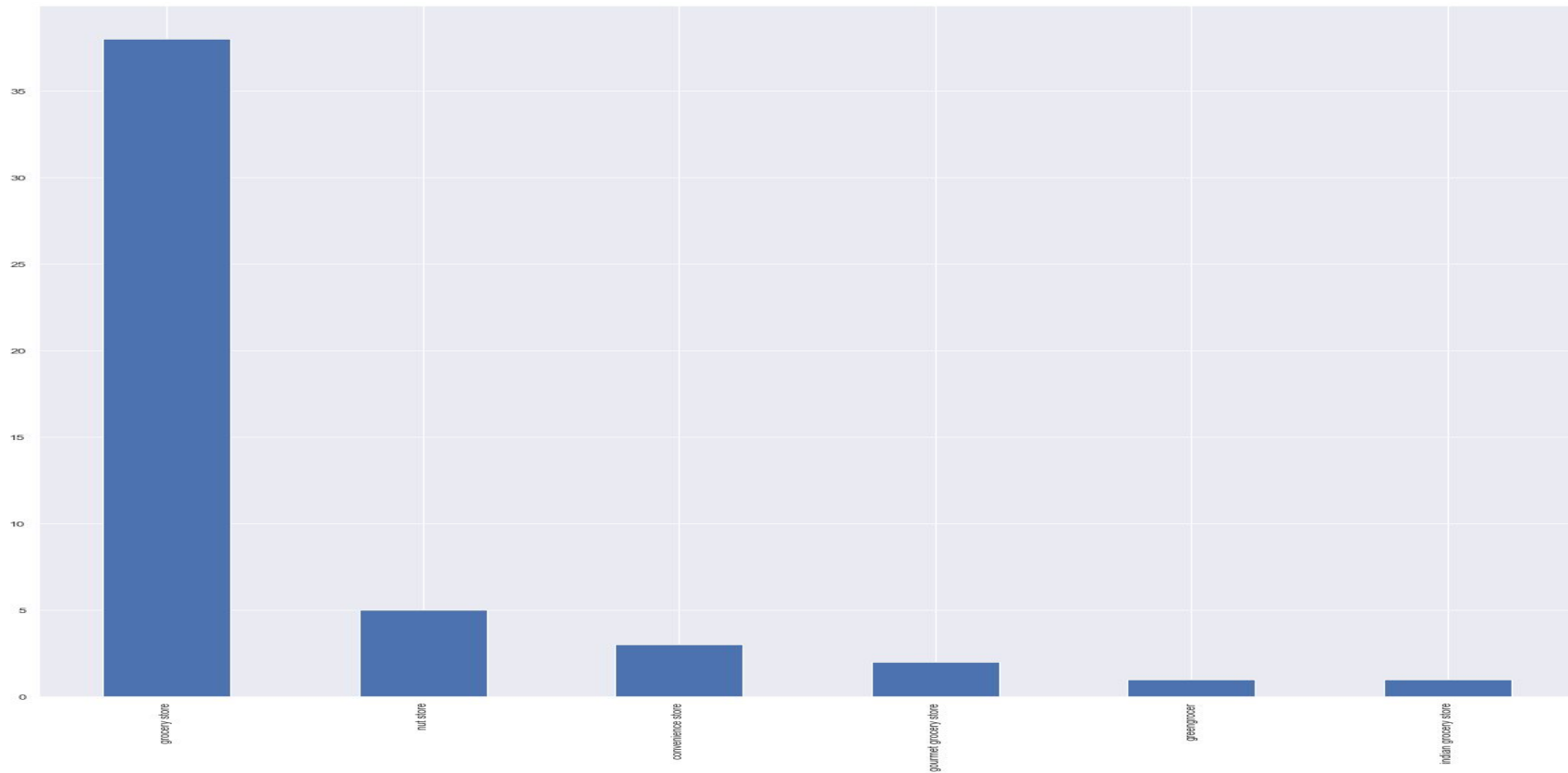
```
In [706]: pd.value_counts(places_qurtubah['main_category'])
```

```
Out[706]: restaurant      104  
          coffee_cafe      77  
          mosque          68  
          school          56  
          grocery         50  
          hospital_clinic  37  
          supermarket     29  
          other           29  
          clothing        16  
          pharmacy        13  
          fitness         13  
          dessert          5  
          company          5  
          mall             2  
          Name: main_category, dtype: int64
```

EDA : How diverse are the destinations in Qurtubah?



EDA : How diverse are the destinations in Qurtubah?



EDA : What are the best destinations?

Top Resturants

```
In [852]: rest=places_qurtubah[places_qurtubah['main_category']=='restaurant']  
rest[(rest['reviewsCount']>=200) & (rest['rating']>=4)].sort_values(by='rating', ascending=False)
```

Out[852]:

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
883	broburger	restaurant	rp7g+xc qurtubah, riya dth saudia arabia	24.814910	46.726293	4.4	381.0	\$	0.605897	restaurant
808	burgerfuel nakhlah	hamburger restaurant	rp6m+5j qurtubah, riya dth saudia arabia	24.810420	46.734078	4.4	1112.0	\$\$\$	0.718448	restaurant
2165	golden chimney / قولدن شيمينى	indian restaurant	qurtubah	24.802600	46.738528	4.3	1524.0	\$\$	1.690419	restaurant
842	arabt alfool	restaurant	rp3q+c6 qurtubah, riya dth saudia arabia	24.803609	46.738118	4.3	1193.0	\$	1.570940	restaurant
904	piatto restaurant	italian restaurant	rp5p+f5 qurtubah, riya dth saudia arabia	24.808660	46.735442	4.2	2221.0	\$\$	0.948754	restaurant
903	steak house	american restaurant	rp5p+c4 qurtubah, riya dth saudia arabia	24.808615	46.735276	4.2	1457.0	\$\$\$	0.947487	restaurant
812	بيتوتى	chinese restaurant	rp4p+mh qurtubah, riya dth saudia arabia	24.806628	46.736498	4.2	466.0	\$\$	1.198111	restaurant
844	البيك - albaik	restaurant	rpmm+24 qurtubah, riya dth saudia arabia	24.832603	46.732855	4.2	4187.0	\$	1.781590	restaurant
899	firegrill	mexican restaurant	rp5p+c4 qurtubah, riya dth saudia arabia	24.808622	46.735291	4.1	818.0	\$\$	0.947259	restaurant
886	samarqandi restaurant	restaurant	rpjh+6q qurtubah, riya dth saudia arabia	24.830620	46.729397	4.1	5276.0	\$	1.580924	restaurant
		hamburger	rp73+ms qurtubah, riya dth saudia arabia							

EDA : What are the best destinations?

Top Cafes

```
In [853]: rest=places_qurtubah[places_qurtubah['main_category']=='coffee_cafe']  
rest[(rest['reviewsCount']>=200) & (rest['rating']>=4)].sort_values(by='rating', ascending=False)
```

Out[853]:

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
547	wafflelicious™ وافليشز	coffee store	rppq+8m qurtubah, riyadh saudi arabia	24.835791	46.739216	4.5	227.0	NaN	2.254764	coffee_cafe
854	orta coffee	coffee shop	rp8h+cg qurtubah, riyadh saudi arabia	24.816095	46.728825	4.4	217.0	NaN	0.325280	coffee_cafe
915	starbucks	coffee shop	rp58+6m qurtubah, riyadh saudi arabia	24.808040	46.716678	4.3	201.0	\$\$	1.815912	coffee_cafe
916	coffee cherries	coffee shop	rpjj+px qurtubah, riyadh saudi arabia	24.831834	46.732477	4.3	816.0	\$\$	1.694684	coffee_cafe
924	ounce speciality cafe	cafe	rp8g+2j qurtubah, riyadh saudi arabia	24.815002	46.726604	4.3	995.0	\$	0.572848	coffee_cafe
740	8oz coffee ايت اوز كوفي	coffee shop	rp6m+vr qurtubah, riyadh saudi arabia	24.812143	46.734597	4.2	558.0	NaN	0.560631	coffee_cafe
821	ben's art	cafe	rp7m+8j qurtubah, riyadh saudi arabia	24.813359	46.734125	4.2	308.0	NaN	0.419328	coffee_cafe
864	besalu cafe	coffee shop	rpjj+qx qurtubah, riyadh saudi arabia	24.831961	46.732392	4.2	457.0	NaN	1.708479	coffee_cafe
872	java time	cafe	rp7g+xv qurtubah, riyadh saudi arabia	24.814908	46.727135	4.2	1321.0	\$\$	0.525859	coffee_cafe
925	quill cafe	cafe	rp7g+w8 qurtubah, riyadh saudi arabia	24.814763	46.725764	4.2	416.0	NaN	0.661687	coffee_cafe
843	dunkin donuts10190	coffee shop	rp6m+9p qurtubah, riyadh saudi arabia	24.810922	46.734293	4.1	302.0	\$\$	0.672417	coffee_cafe
881	gaba cafe	coffee shop	rpjm+v4 qurtubah, riyadh saudi arabia	24.832165	46.732778	4.1	255.0	NaN	1.732584	coffee_cafe
919	cacti cafe كاكتي	coffee shop	rpmp+j7 qurtubah, riyadh saudi arabia	24.834013	46.735709	4.1	1116.0	NaN	1.972110	coffee_cafe

EDA : What are the best destinations?

Hidden Gems

some of the not so popular but highly rated places in qurtubah.

```
In [862]: rest=places_qurtubah[places_qurtubah['main_category']=='restaurant']
rest[(rest['reviewsCount']>50)&(rest['reviewsCount']<=200) & (rest['rating']>=4.3)].sort_values(by='rating', ascending=False)
```

Out[862]:

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
902	the 365	restaurant	rp59+87 qurtubah, riya	24.808320	46.718294	4.8	67.0	NaN	1.661709	restaurant
819	مطعم تشرين teshrine	restaurant	rp4p+mh qurtubah, riya	24.806724	46.736478	4.3	119.0	NaN	1.187573	restaurant

```
In [863]: cafe=places_qurtubah[places_qurtubah['main_category']=='coffee_cafe']
cafe[(cafe['reviewsCount']>50)&(cafe['reviewsCount']<=200) & (cafe['rating']>=4.3)].sort_values(by='rating', ascending=False)
```

Out[863]:

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
550	ارتو كافيه ARTO CAFE	cafe	rq92+fr qurtubah, riya	24.818746	46.752049	4.7	162.0	NaN	2.037492	coffee_cafe
913	خبير الشاي	coffee shop	rp9m+h9 qurtubah, riya	24.826408	46.733494	4.6	133.0	NaN	1.101004	coffee_cafe
582	قهوة انزو enzo coffee	coffee store	rp4p+qx qurtubah, riya	24.806915	46.737487	4.5	94.0	NaN	1.210978	coffee_cafe
910	محتوى القهوة - coffee content	coffee shop	rp9j+3r qurtubah, riya	24.817650	46.732077	4.5	115.0	NaN	0.117046	coffee_cafe
857	مزاج مغربي	coffee shop	rq42+38 qurtubah, riya	24.805185	46.750795	4.3	145.0	NaN	2.282493	coffee_cafe
874	قهوة روانا (مختصة) rwana coffee	coffee shop	rq73+qf qurtubah, riya	24.814427	46.753736	4.3	137.0	NaN	2.207017	coffee_cafe

EDA : What are the best destinations?

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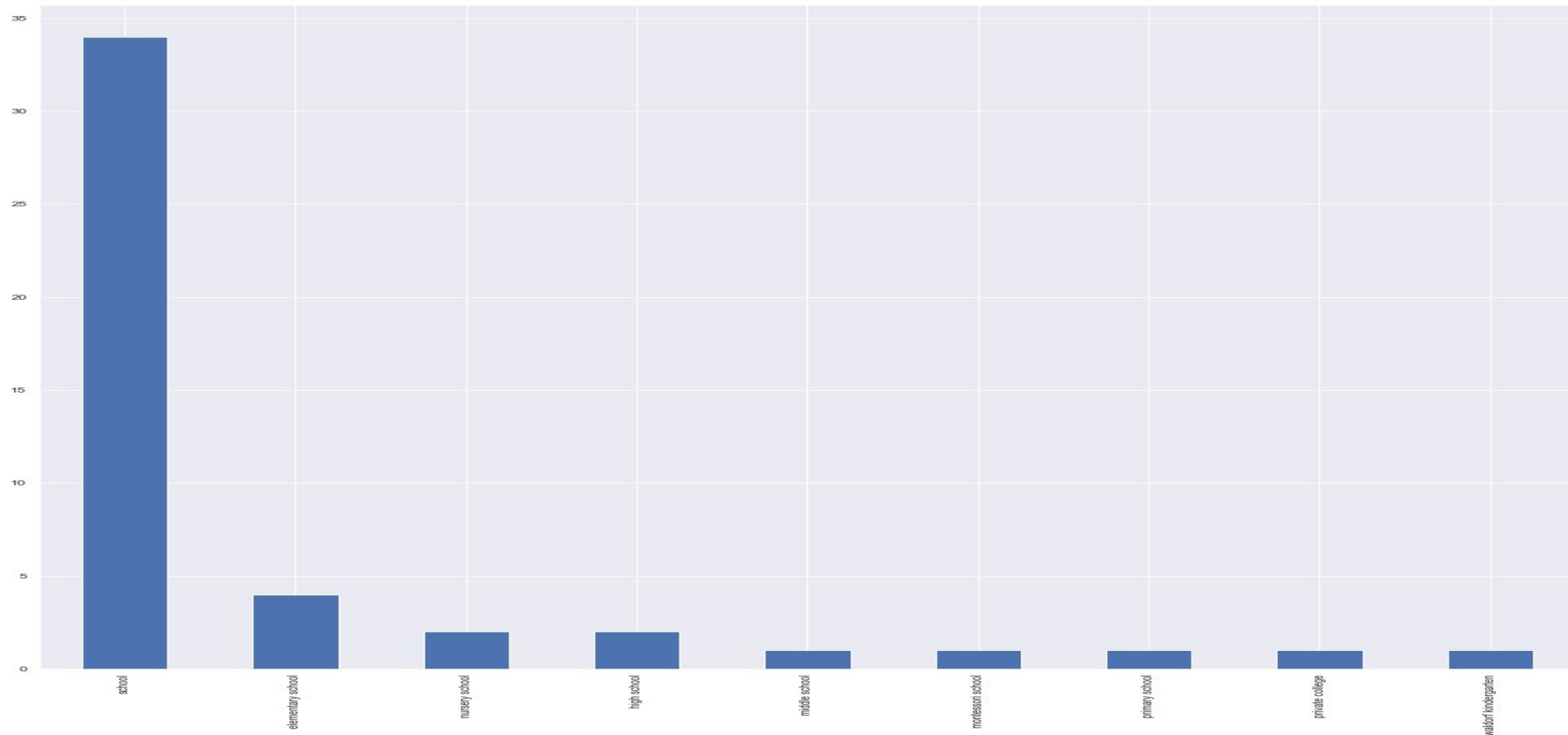
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		hamburger	rp73+ms qurtubah, riya dth saudia arabia							

EDA : How family friendly is the neighborhood?

for a neighborhood to be considered family friendly some criteria needs to be met, it needs to have a decent number of the following amenities :

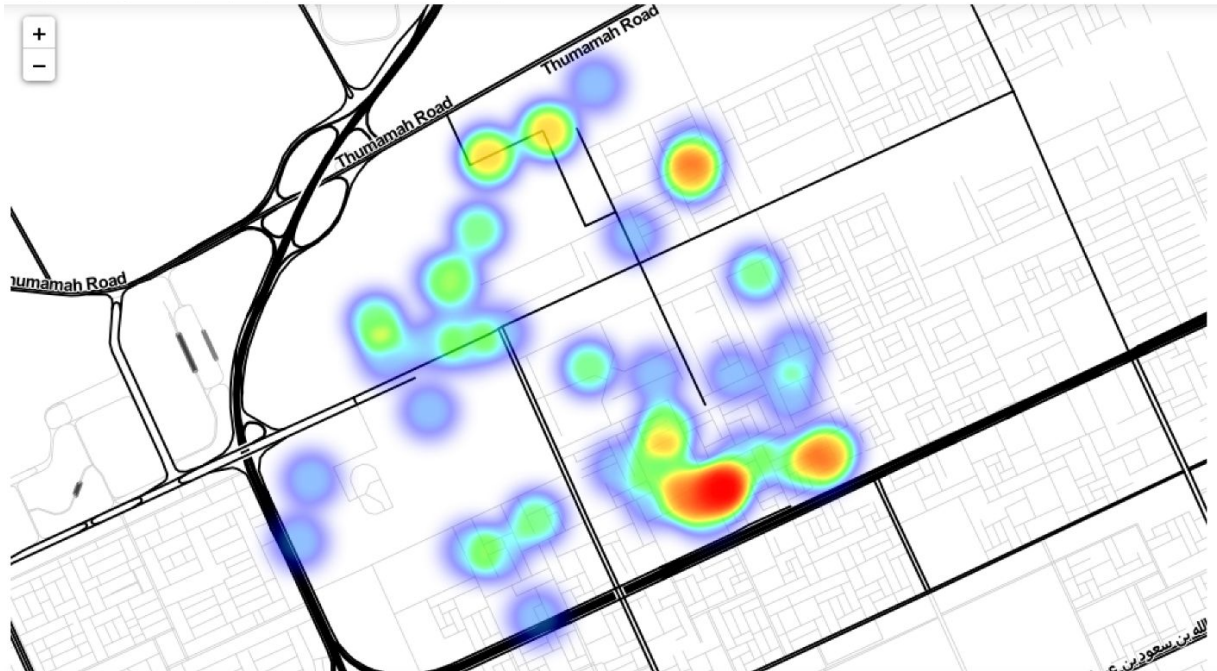
- 1) Good Schools.
- 2) Kid-Friendly Amenities.
- 3) Neighbors (people density).
- 4) Daily Necessities.

EDA : How family friendly is the neighborhood?



EDA : How family friendly is the neighborhood?

Schools density heatmap



EDA : How family friendly is the neighborhood?

Schools Rating

Schools Rating

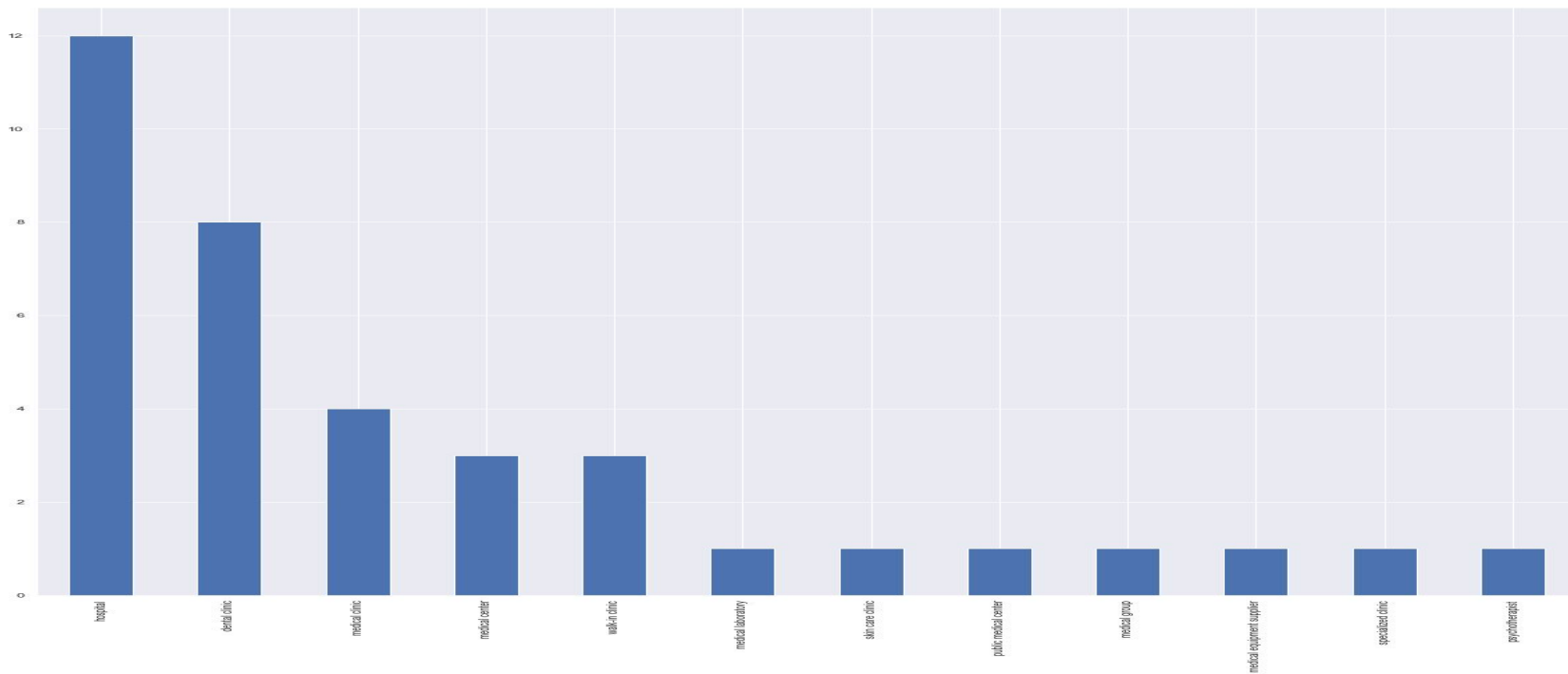
```
Qs=Qs.dropna(subset=['rating'], how='any')
Qs['reviewsCount']=Qs['reviewsCount'].astype(int)
```

```
Qs[Qs['reviewsCount']>=20].sort_values(by='rating', ascending=False)
```

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
322	معهد النجاح لتعليم الوحيين	school	rpjh+6c qurtubah, riyadh saudi arabia	24.828064	46.731059	4.6	22	NaN	1.278318	school
805	مدارس ابن رشد قرطبة	school	rp7x+h8 qurtubah, riyadh saudi arabia	24.813917	46.748270	4.5	97	NaN	1.668986	school
375	حضانة بدايات	nursery school	rp6v+6f qurtubah, riyadh saudi arabia	24.810522	46.743692	4.4	45	NaN	1.359873	school
385	برنامج الرياحين لتخفيف القرآن الكريم فرع قرطبة	school	rp3j+3q qurtubah, riyadh saudi arabia	24.802658	46.731818	4.1	31	NaN	1.550378	school
702	average building	elementary school	rp9h+vh qurtubah, riyadh saudi arabia	24.819663	46.728979	3.8	51	NaN	0.457105	school
782	primary school boys	school	rp9w+q6 qurtubah, riyadh saudi arabia	24.826913	46.745550	3.7	332	NaN	1.784744	school
710	مدارس التربية النموذجية قرطبة	school	rp7q+m6 qurtubah, riyadh saudi arabia	24.814168	46.738106	3.7	64	NaN	0.672969	school
1920	riyadh elm university	private college	rp39+95 qurtubah, riyadh saudi arabia	24.803396	46.717934	3.7	40	NaN	2.042346	school

EDA : How family friendly is the neighborhood?

Medical Services

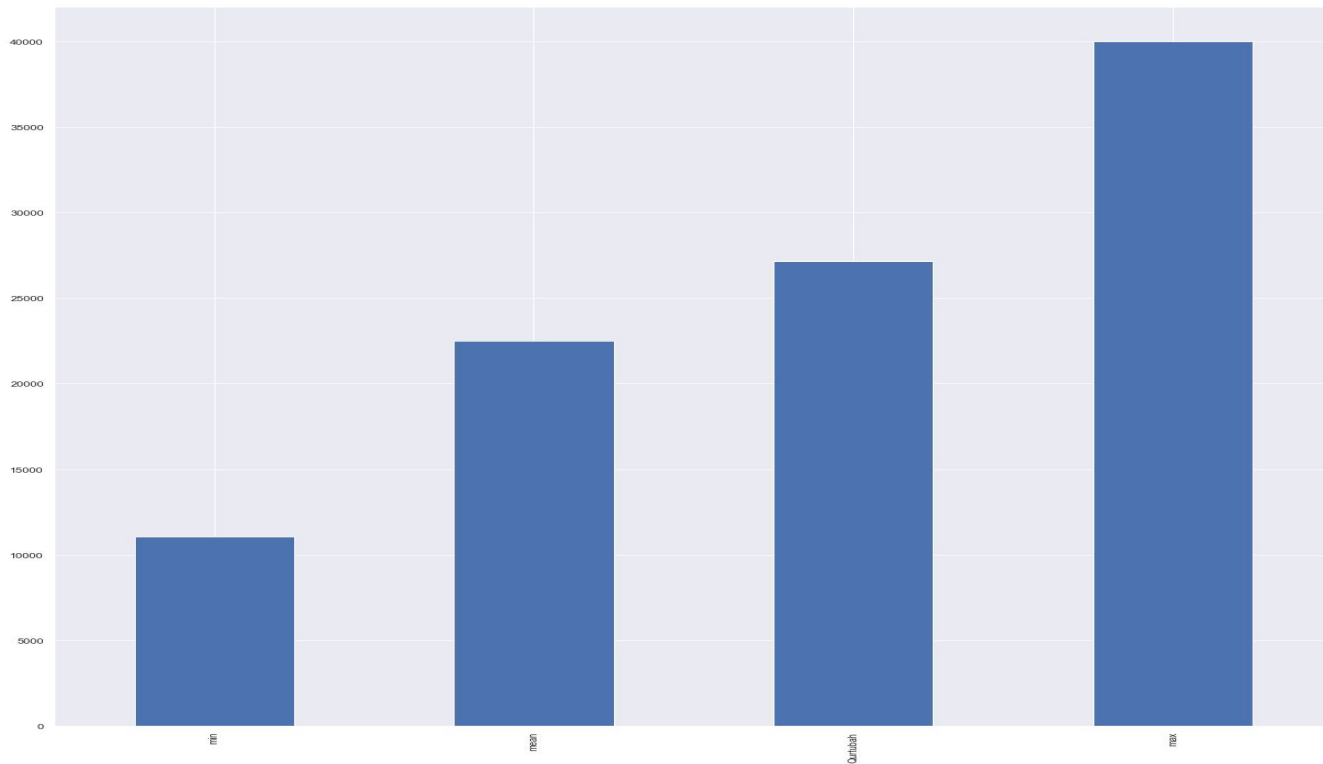


EDA : How family friendly is the neighborhood?

Mosques Density Heatmap

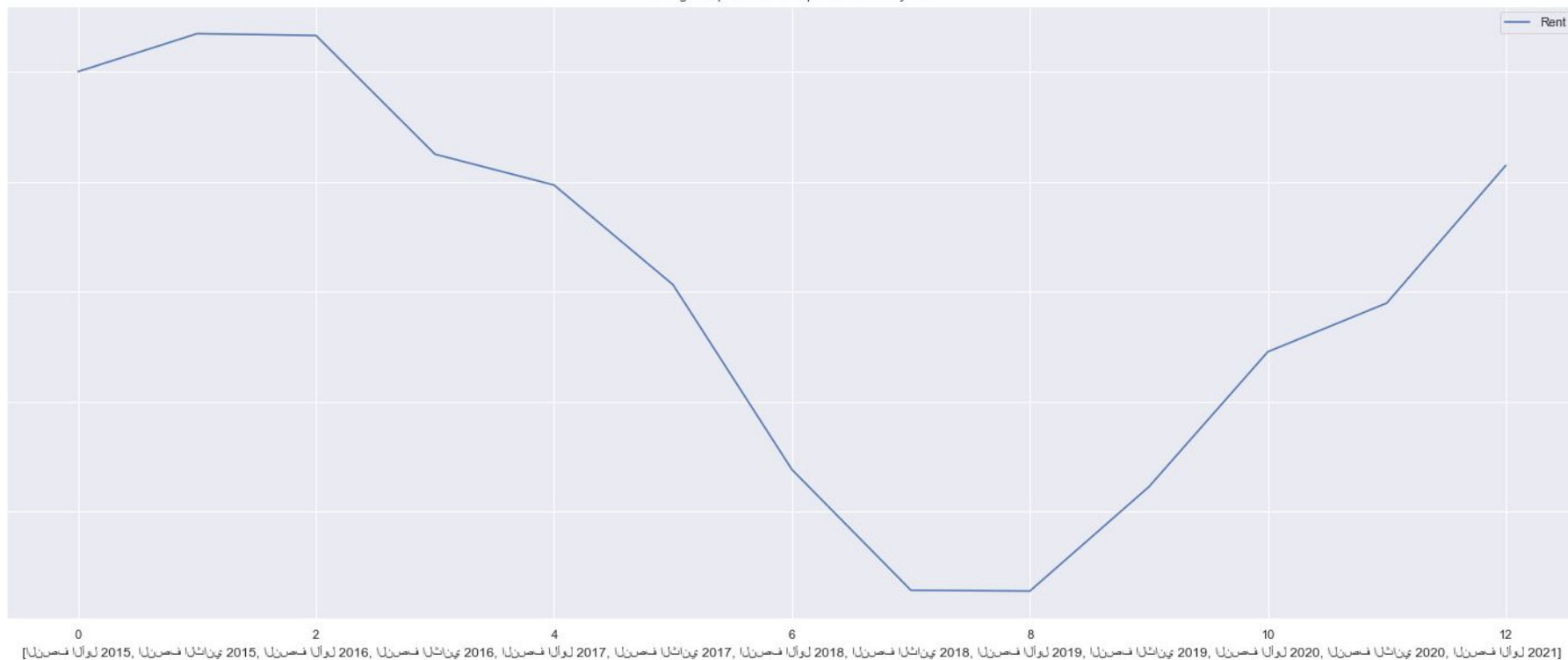


EDA : How is rent affected in comparison to other neighborhoods?



EDA : How is rent affected in comparison to other neighborhoods?

change of qurtubah's rent prices over the years



Conclusion

Through this project we found that Qurtubah has great diversity in its destinations equaling to about 82 subcategories and 14 main categories, the number of destinations is also very high, it has about 77 coffee related stores and 104 restaurants of different types, there're all kinds of important neighborhood amenities like schools, mosques, clinics, pharmacies, and groceries.

the neighborhood is very family-friendly and has a large number of schools that are at walking distance.

Rent in qurtubah is above average and is expected to increase in the upcoming years.

Due to lack of time, some work is left for the future, there is still more cleaning to do, and a lot of questions to answer like walkability and other measures.

**Thanks For
Listening!**