



NEIGHBORHOOD INSIGHT: Qurtubah

Urban data analysis

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?

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!



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

Data Collection

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: Collection from Google maps



Google Places API

Data: Collection from Google maps



Data: Collection from Google maps



Web Scraper

[apify/web-scraper](#)

Crawls arbitrary websites using the Chrome browser and extracts data from pages using a provided JavaScript code. The ac...



apify

20,888



Google Search Results Scraper

[apify/google-search-scraper](#)

SERP API to enable you to scrape Google Search Engine Results Pages (SERPs). Extract organic and paid results, ads, quer...



apify

11,633



Google Maps Scraper

[drobnikj/crawler-google-places](#)

Extend the official Google Maps API and scrape reviews, photos, and popular times from Google Places. Google popular tim...



drobnikj

10,248



Instagram Scraper

[jaroslavhejlek/instagram-scraper](#)

Scrape and download Instagram posts, profiles, places, hashtags, photos, and comments. Supports search queries and URL l...



jaroslavhejlek

8,042



Facebook Pages Scraper

[pocesar/facebook-pages-scraper](#)



YouTube Scraper

[bernardo/youtube-scraper](#)



SEO Audit Tool

[drobnikj/seo-audit-tool](#)



Twitter Scraper

[vdrmota/twitter-scraper](#)

Data: Collection from Google maps

Input

Editor JSON

Provide either a list of search keywords or search/place URLs.

Start URLs (optional) ?

+ Add URL

Link remote text file

Upload text file

Search Terms (optional) ?

park Qurtubah Riyad

X

mall Qurtubah Riyad

X

gym Qurtubah Riyad

X

spa Qurtubah Riyad

X

+ Add

>Edit raw

Max crawled places (optional) ?

9999999

+

-

Max crawled places per search (optional) ?

9999999

+

-

Run

Create new task

Data: Collection from Google maps



Your platform usage exceeded the free limit of \$5 per month.
[upgrade](#) to a paid plan.

Data: Collection from Google maps

The screenshot shows the Octoparse homepage. At the top, there's a search bar with the placeholder "Enter webpage URL(s) or a task template name to get started" and a blue "Start" button. Below the search bar is a section titled "Popular Task Templates" with a "More>>" link. This section displays icons for various websites: Amazon, eBay, Booking, TripAdvisor, Instagram, Twitter, YouTube, Yellowpages, Google Maps, Indeed, Yelp, and Facebook. Further down, there's a "Tutorials" section with two cards: "Template Mode" (using pre-built templates) and "Advanced Mode" (customizing scrapers). Each tutorial card includes a "Beginner Guide" button and a "Try it!" button.

- Has a community.
- Tasks can be imported
- Templates are paid.

Data: Collection from Google maps

Home New Task X

Task Group: MyGroup New Group

Input URL(s): Enter manually Import from file Import from task Batch generate

Website: Enter the webpage URL(s) you'd like to extract data from

Please enter no more than 10K URLs.

Save

Data: Collection from Google maps

gym - خرائط Google C gym - خرائط Google

+ Tips

List data detected. Preview your data at the bottom and choose how you'd like to extract the data.

Extract the data in the list

[Create workflow](#) [Cancel](#)

[Not the right webpage?](#)

3days Male Gym - Qurtubah
 (87) ★★★★ 4.4
 صالة رياضة · 2341 7231 م · مفتوح حتى 10:00 م

وقت اللياقة احمر الرجال
 (250) ★★★★ 3.5
 صالة رياضة · طريق الشمامه، Amir م · مفتوح حتى 11:00 م

Saudi Cyclists Club Assembly point

عرض النتائج من 1 - 20

تحديث النتائج عند تحريك الخريطة

Data preview: 5 line(s) of data & 7 fields captured

No.	Title	Image	a4gg8eavtxabhaaclfjrmmhfhsgpd_URL	mw4etd	uy7f9	Content	Content1
1	3days Male Gym ...	https://lh5.google...	https://www.google.com/maps/place/3days+Male+Gym+++Qurtubah/data=!4m5!3m4...	4.4	(87)	صالة رياضة	7231 2341 ...
2	وقت اللياقة احمر الرجال	https://lh5.google...	https://www.google.com/maps/place/%D9%88%D9%82%D8%AA+%D8%A7%D9%88%D9%8A...	3.5	(250)	صالة رياضة	طريق الشمامه · Amir
3	Saudi Cyclists Cl...	https://maps.gstatic.com...	https://www.google.com/maps/place/Saudi+Cyclists+Club+Assembly+point/data=!4m...	5.0	(1)	صالة رياضة	RPR8+9M2
4	فنتس تايم برو	https://maps.gstatic.com...	https://www.google.com/maps/place/%D9%81%D8%AA%D9%86%D8%B3+%D8%A...			صالة رياضة	7854, Saudi Arabia
5	Fitness time 16+ ...	https://maps.gstatic.com...	https://www.google.com/maps/place/Fitness+time+16%2B+munsiyah/data=!4m5!3m...			صالة رياضة	

Data: Collection from Google maps

The screenshot shows a Google Maps search for "gym - خرانطه" in Jeddah, Saudi Arabia. The map displays several gym locations with red markers. A workflow interface is overlaid on the right side of the screen, showing a success message and options for paginating, clicking "Load More", running the task, or checking the workflow. Below the map is a "Data Preview" table showing five rows of extracted data.

Workflow message:

- Workflow created successfully.
- Click the page element you'd like to extract, or choose from the following options.

Action: Extract Data

Extract data in the loop:

Data Fields	No.	Title	Image	a4gg8eavt...	mw4etd	uy7f9	Content	Content1
Page1	1	3days Male Gym - ...	https://lh5.googleusercontent.com	https://www.google....	4.4	(87)	صاله رياضة	7231 2341 ...
Extract Data	2	وقت اللياقة احمد الرجال	https://lh5.googleusercontent.com	https://www.google....	3.5	(250)	صاله رياضة	طريق الثامنة Amir
	3	Saudi Cyclists Club ...	https://maps.gstatic.com	https://www.google....	5.0	(1)	صاله رياضة	RPR8+9M2
	4	فتنس تايم برو	https://maps.gstatic.com	https://www.google....			صاله رياضة	7854, Saudi Arabia
	5	Fitness time 16+ m...	https://maps.gstatic.com	https://www.google....			صاله رياضة	

Data: Collection from Foursquare



- Free
- Limited locations.

Data: Collection from Foursquare

[194...

```
CLIENT_ID= 'M2LR3AYXV3Y14T4H2LKKX4WIWLNH3QD4F20E32EP3FCNQ5YF'
CLIENT_SECRET= 'UFYEBOCXOILJ234FH1WQK3Y12PLLX4RFPW0VE134VYRE0R2A'
VERSION='20180323'
neighborhood_latitude='24.8166'
neighborhood_longitude= '46.7320'
query="Apparel"
radius=1000
LIMIT=200

url = 'https://api.foursquare.com/v2/venues/explore?&client_id={}&client_secret={}&v={}&ll={},{}&query={}&radius={}&limit={}'.format(
    CLIENT_ID,
    CLIENT_SECRET,
    VERSION,
    neighborhood_latitude,
    neighborhood_longitude,
    query,
    radius,
    LIMIT)
results = requests.get(url).json()
resp = requests.get(url=url, params=params)
data = json.loads(resp.text)
```

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
reviewsCount	number of ratings the place received	int
price	Price range	string

Data: Rent Data From Aqar



حي اشبيلية
حي الازدهار
حي الاسكان
حي الاندلس
حي البدعية
التعاون
الجرادية
حي الجزيرة
الجناذرية
الحزم
حي الحمراء
حي الخالدية
الخزامي
حي الخليج
الدار البيضاء

dist	rent_3_rooms_ave
0	الرائد 40000
1	الواحة 38000
2	الندي 35769
3	العليا 35681
4	الرحمانية 35437
5	النخيل 34907
6	المقا 34899
7	الملك عبدالله 34600
8	الربيع 34332
9	الغدير 34000
10	الياسمين 33569
11	حطين 33288
12	القبروان 33264
13	المحمدية 32916

Data: Final DF

Out [5]:

	title	category		dist	lat	lng	rating	reviewsCount	price
0	أسواق ثمار الجنين	Supermarket	RQ85+RX Al Munsiyah, Riyadh Saudi Arabia	24.817080	46.759923	3.6	197.0	NaN	
1	Meed Store	Convenience store		NaN	24.788248	46.738404	3.9	81.0	NaN
2	Alsultan mart	Supermarket	RQ85+J7 Al Munsiyah, Riyadh Saudi Arabia	24.816546	46.758185	4.0	253.0	NaN	
3	Nespresso	Coffee vending machine		NaN	24.757320	46.630134	4.2	351.0	NaN
4	Wadi square	Shopping mall	QPQ2+RG Al Wadi, Riyadh Saudi Arabia	24.789562	46.701330	4.5	4.0	NaN	

Out [30]:

	title	category		dist	lat	lng	rating	reviewsCount	price	distance
2074	حلاق عادل	صالون حلاقة	6353 3146 13245	مشدیق، قرطبة، الرياض	NaN	NaN	5.0	-2.0	NaN	NaN
2075	حلاق المنشط الذهبي	صالون حلاقة	qurtubah, ri...	شارع عبد الله بن مرحان، حي قرطبة	NaN	NaN	NaN	NaN	NaN	NaN
2081	حلاق نبض اليسر للحلاقة	صالون حلاقة	qurtubah, riyadh ...	شارع البيت العتيق، حي قرطبة	NaN	NaN	NaN	NaN	NaN	NaN
2082	حلاق قمة الاحتراف	صالون حلاقة	6852 3513	دمياط الجديد، قرطبة	NaN	NaN	4.5	-69.0	NaN	NaN
2086	مركز ضياء الامل	صالون تجميل	7900	طريق النوخن بن حسين بن علي، قرطبة، الر...	NaN	NaN	4.9	-7.0	NaN	NaN
2088	حلاق سليمان بن شيخان بن فرحان الملبيه الفضيلي	صالون حلاقة	شارع دبابس بن راشد - حي قرطبة	NaN	NaN	2.5	-2.0	NaN	NaN	
2092	الى للتجميل	صالون تجميل	prince mohamed bin salman, 13247	قرطبة، الرياض	NaN	NaN	NaN	NaN	NaN	NaN
2093	صالون الايادي الذهبية للتزيين النسائي	صالون تجميل	prince mohammad ben salman, 13248	قرطبة، الرياض	NaN	NaN	NaN	NaN	NaN	NaN
2097	9 rounds	gym	khalid bin alwaled road, 13244	قرطبة، الرياض	NaN	NaN	4.2	378.0	NaN	NaN

Data Cleaning

Cleaning: Remove Duplicates

check for duplicates

```
In [6]: places.duplicated()
```

```
Out[6]: 0      False
        1      False
        2      False
        3      False
        4      False
       ...
      2140     True
      2141     True
      2142     True
      2143     True
      2144     True
Length: 2145, dtype: bool
```

```
In [7]: places.drop_duplicates(inplace=True)
```

```
In [8]: places.shape
```

```
Out[8]: (2137, 8)
```

Cleaning: Treat Nulls

```
places.isna().sum()
```

title	0
category	32
dist	274
lat	59
lng	59
rating	208
reviewsCount	52
price	1849
dtype:	int64

Cleaning: Removing places that are out of range

	title	category		dist	lat	lng	rating	reviewsCount	price
0	أسواق ثمرات الجنين	Supermarket	RQ85+RX Al Munsiyah, Riyadh Saudi Arabia	24.817080	46.759923	3.6		197.0	NaN
1	Meed Store	Convenience store		NaN	24.788248	46.738404	3.9	81.0	NaN
2	Alsultan mart	Supermarket	RQ85+J7 Al Munsiyah, Riyadh Saudi Arabia	24.816546	46.758185	4.0		253.0	NaN
3	Nespresso	Coffee vending machine		NaN	24.757320	46.630134	4.2	351.0	NaN
4	Wadi square	Shopping mall	QPQ2+RG Al Wadi, Riyadh Saudi Arabia	24.789562	46.701330	4.5		4.0	NaN

Cleaning: Removing places that are out of range

```
#method to calculate distance.
#
import math

def distance(origin, destination):
    lat1, lon1 = origin
    lat2, lon2 = destination
    radius = 6371 # km

    dlat = math.radians(lat2-lat1)
    dlon = math.radians(lon2-lon1)
    a = math.sin(dlat/2) * math.sin(dlat/2) + math.cos(math.radians(lat1)) \
        * math.cos(math.radians(lat2)) * math.sin(dlon/2) * math.sin(dlon/2)
    c = 2 * math.atan2(math.sqrt(a), math.sqrt(1-a))
    d = radius * c

    return d
```

Cleaning: Removing places that are out of range

Out [13]:

	title	category		dist	lat	lng	rating	reviewsCount	price	distance
0	أسواق ثمرات الجنين	Supermarket	RQ85+RX Al Munsiyah, Riyadh Saudi Arabia	24.817080	46.759923	3.6	197.0	NaN	2.818646	
1	Meed Store	Convenience store		NaN	24.788248	46.738404	3.9	81.0	NaN	3.218145
2	Alsultan mart	Supermarket	RQ85+J7 Al Munsiyah, Riyadh Saudi Arabia	24.816546	46.758185	4.0	253.0	NaN	2.642804	
3	Nespresso	Coffee vending machine		NaN	24.757320	46.630134	4.2	351.0	NaN	12.214699
4	Wadi square	Shopping mall	QPQ2+RG Al Wadi, Riyadh Saudi Arabia	24.789562	46.701330	4.5	4.0	NaN	4.315402	

In [14]: `temp=places[(places['dist'].isna()) & (places['distance']<=2.2)]`

`places_qurtubah=places[places['dist'].str.contains('qurtubah|قرطبة')]`

Cleaning: Removing places that are out of range

Maps Library: Folium



Cleaning: Adding main categories

```
places_qurtubah['category'].unique()

array(['hospital', 'convenience store', 'supermarket', 'restaurant',
       'grocery store', 'candy store', 'nut store', 'swimming pool',
       'chocolate cafe', 'ice cream shop', 'shopping mall', 'cafe',
       'gourmet grocery store', 'fast food restaurant', 'hypermarket',
       'waldorf kindergarten', 'school', 'software company',
       'coffee roasters', 'flower designer', 'nursery school',
       'primary school', 'coffee machine supplier', 'middle school',
       'coffee wholesaler', 'chicken restaurant', 'pizza restaurant',
       'coffee store', 'hamburger restaurant', 'coffee shop',
       'breakfast restaurant', 'shawarma restaurant',
       'falafel restaurant', 'cake shop', 'high school',
       'elementary school', 'tea house', 'yemenite restaurant',
       'haute french restaurant', 'asian restaurant',
       'american restaurant', 'italian restaurant', 'lebanese restaurant',
       'steak house', 'chinese restaurant', 'montessori school',
       'middle eastern restaurant', 'mexican restaurant', 'mosque',
       'pharmacy', 'auto machine shop', 'medical laboratory',
       'dental clinic', 'medical center', 'public medical center',
       'medical clinic', 'walk-in clinic', 'skin care clinic',
       'specialized clinic', 'psychotherapist', 'bakery',
       'corporate office', 'private college', 'organic drug store',
       'pharmaceutical company', 'park', 'salon', 'barbershop', 'gym',
       'nursery', 'mall', 'resort', 'court', 'video games store',
       'tailor', 'apparel', 'shoes', 'indian restaurant',
       'medical equipment supplier', 'medical group',
       'indian grocery store', 'greengrocer'], dtype=object)
```

Cleaning: Adding main categories

```
: main_category=[]

cafe_coffee = ['coffee', 'cafe']
grocery = ['convenience', 'nut store', 'grocery', 'greengrocer']
company=['company', 'office']
restaurant=['restaurant', 'steak house']
pharmacy= ['pharmacy', 'drug']
hospital_clinic=['hospital', 'medical', 'clinic', 'psychotherapist']
school=['school', 'kindergarten', 'college']
supermarket=['supermarket', 'hypermarket']
dessert=['ice cream shop', 'cake shop', 'candy store']
clothing=['apparel', 'shoes', 'tailor']
fitness=['gym', 'court', 'pool']

for row in places_qurtubah['category']:
    if any(x in row for x in cafe_coffee) : main_category.append('coffee_cafe')
    elif any(x in row for x in grocery) : main_category.append('grocery')
    elif 'mall' in row : main_category.append('mall')
    elif 'mosque' in row : main_category.append('mosque')
    elif any(x in row for x in school) : main_category.append('school')
    elif any(x in row for x in restaurant) : main_category.append('restaurant')
    elif any(x in row for x in pharmacy) : main_category.append('pharmacy')
    elif any(x in row for x in hospital_clinic) : main_category.append('hospital_clinic')
    elif any(x in row for x in company) : main_category.append('company')
    elif any(x in row for x in supermarket) : main_category.append('supermarket')
    elif any(x in row for x in dessert) : main_category.append('dessert')
    elif any(x in row for x in clothing) : main_category.append('clothing')
    elif any(x in row for x in fitness) : main_category.append('fitness')
    else: main_category.append('other')

: len(main_category)
```

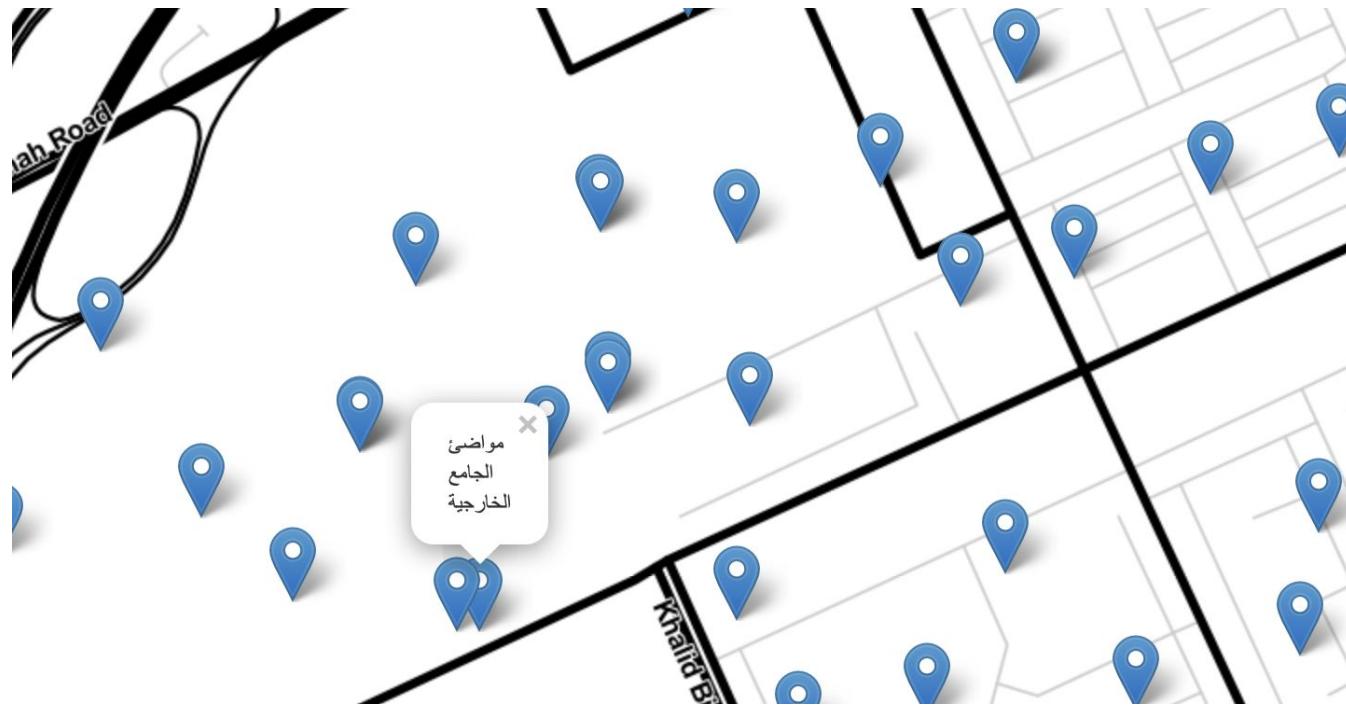
Cleaning: Adding main categories

```
In [45]: pd.value_counts(places_qurtubah['main_category'])
```

```
Out[45]: restaurant      104
coffee cafe        77
mosque            68
school             56
grocery            50
hospital_clinic    38
other              30
supermarket         29
clothing            16
pharmacy            13
fitness              13
dessert              5
company              5
mall                  2
Name: main_category, dtype: int64
```

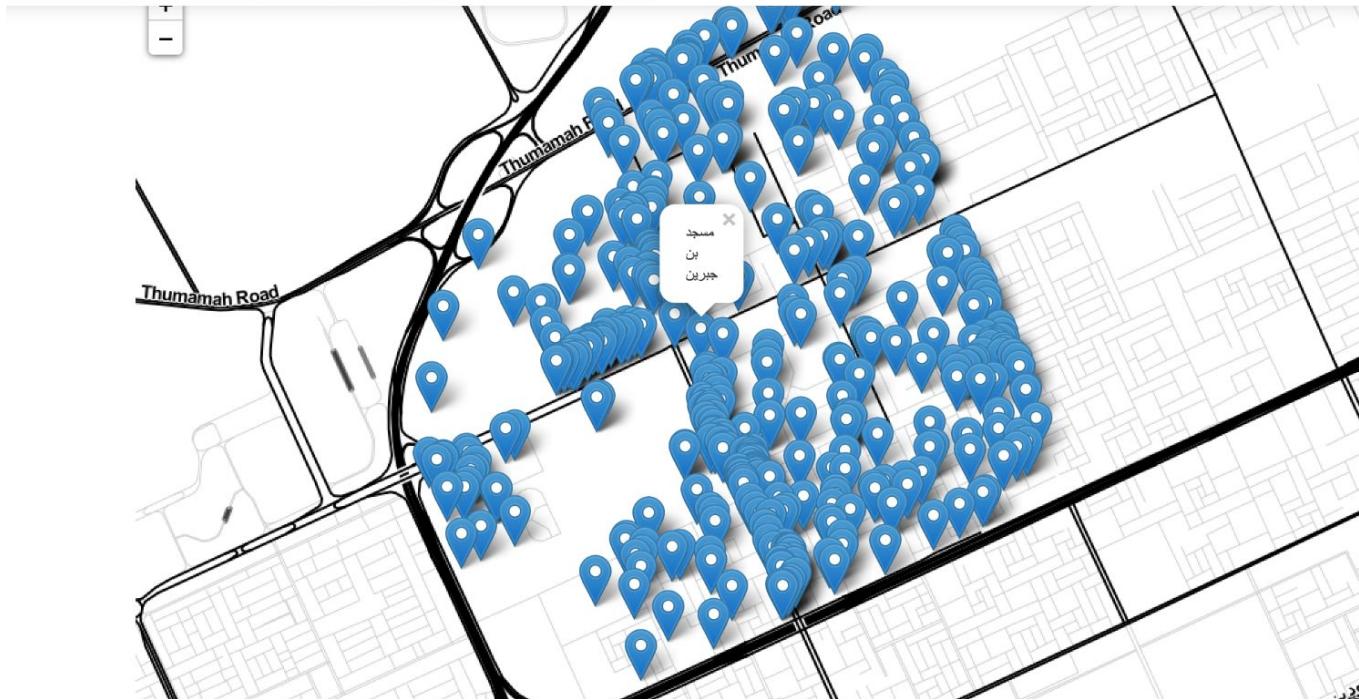
Cleaning: Removing Duplicates From map

Maps Library: Folium

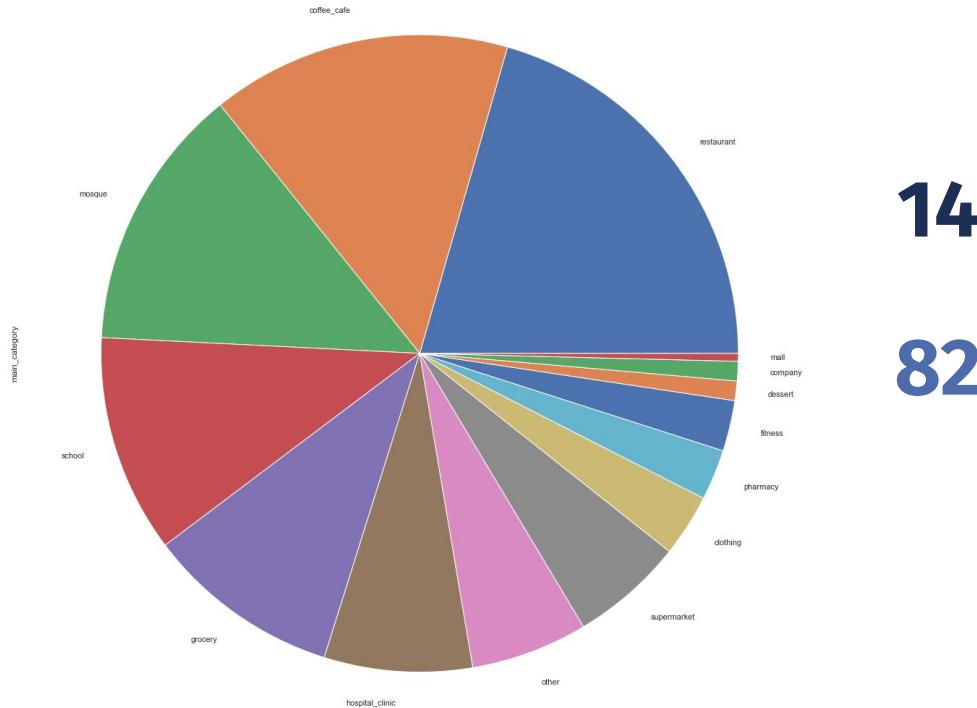


EDA

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.

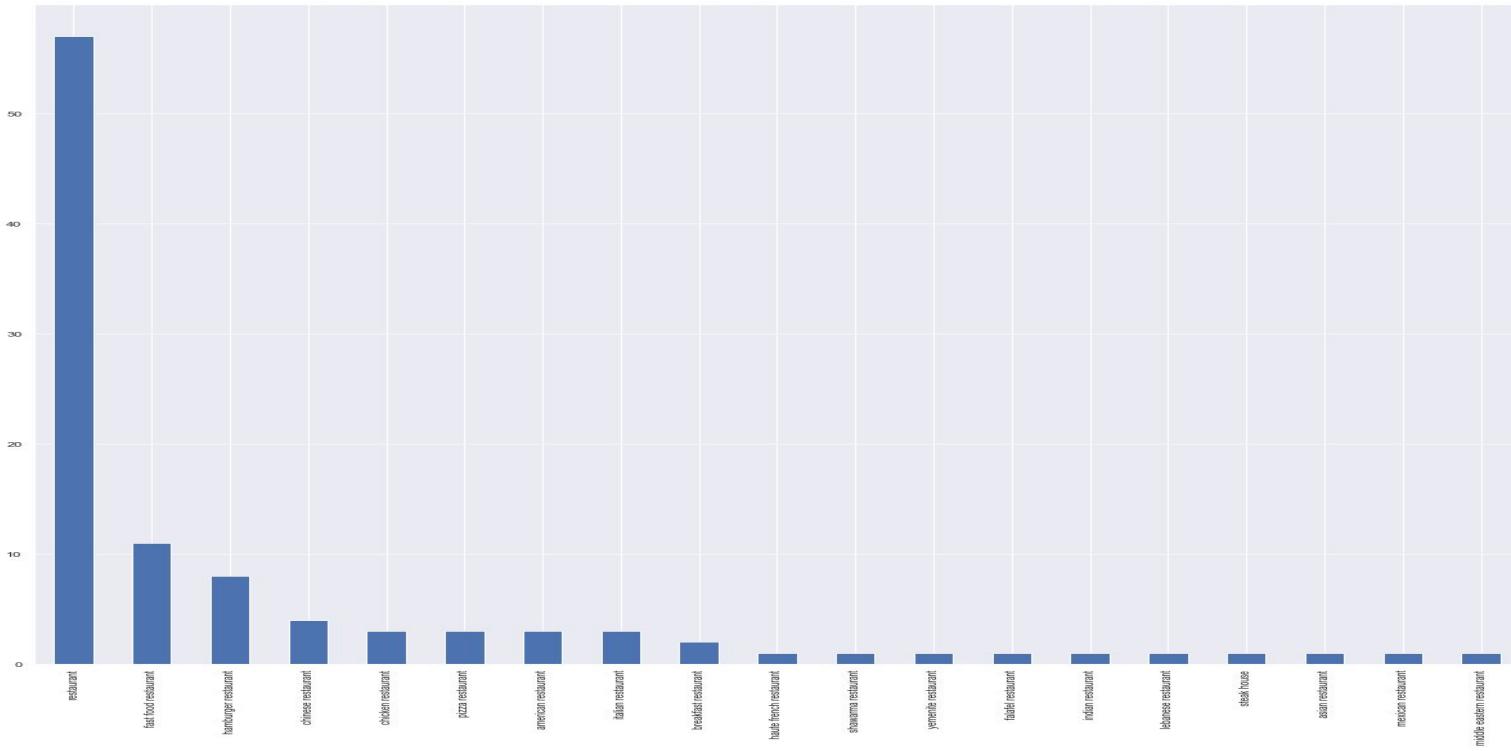
EDA : How diverse are the destinations in Qurtubah?

```
pd.value_counts(places_qurtubah['main_category'])
```

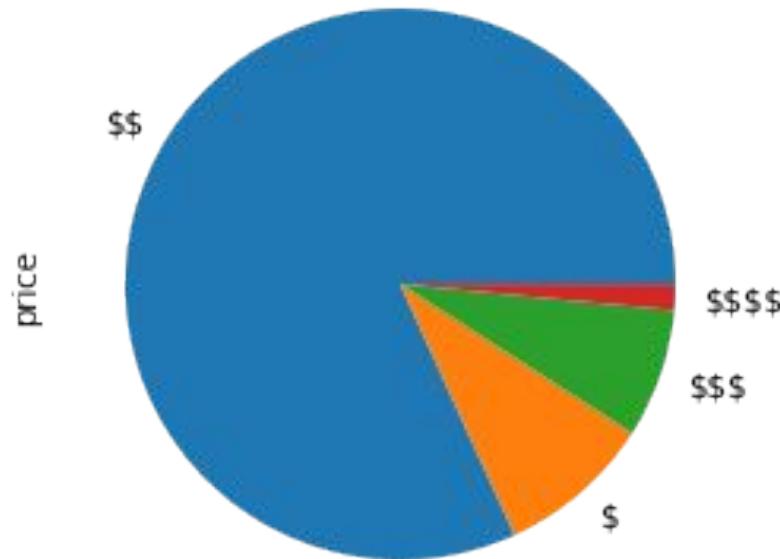
restaurant	104
coffee_cafe	77
mosque	65
grocery	50
school	47
hospital_clinic	37
supermarket	29
other	28
clothing	16
fitness	13
pharmacy	13
company	5
dessert	5
mall	2

Name: main_category, dtype: int64

EDA : How diverse are the destinations in Qurtubah?



EDA : Price Range Diversity



EDA : What are the best destinations?

Top Restaurants

```
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+xg qurtubah, riyadh saudi arabia	24.814910	46.726293	4.4	381.0	\$ 0.605897		restaurant
808	burgerfuel nakhlah	hamburger restaurant	rp6m+5j qurtubah, riyadh saudi arabia	24.810420	46.734078	4.4	1112.0	\$\$\$ 0.718448		restaurant
2165	golden chimney / قردن شيني /	indian restaurant	qurtubah	24.802600	46.738528	4.3	1524.0	\$\$ 1.690419		restaurant
842	arabt alfool	restaurant	rp3q+c6 qurtubah, riyadh saudi arabia	24.803609	46.738118	4.3	1193.0	\$ 1.570940		restaurant
904	piatto restaurant	italian restaurant	rp5p+f5 qurtubah, riyadh saudi arabia	24.808660	46.735442	4.2	2221.0	\$\$ 0.948754		restaurant
903	steak house	american restaurant	rp5p+c4 qurtubah, riyadh saudi arabia	24.808615	46.735276	4.2	1457.0	\$\$\$ 0.947487		restaurant
812	بيتري	chinese restaurant	rp4p+mh qurtubah, riyadh saudi arabia	24.806628	46.736498	4.2	466.0	\$\$ 1.198111		restaurant
844	البيك - albaik	restaurant	rpmm+24 qurtubah, riyadh saudi arabia	24.832603	46.732855	4.2	4187.0	\$ 1.781590		restaurant
899	firegrill	mexican restaurant	rp5p+c4 qurtubah, riyadh saudi arabia	24.808622	46.735291	4.1	818.0	\$\$ 0.947259		restaurant
886	samarqandi restaurant	restaurant	rpjh+h6q qurtubah, riyadh saudi arabia	24.830620	46.729397	4.1	5276.0	\$ 1.580924		restaurant
		hamburger	rn72+mn qurtubah, riyadh							

EDA : What are the best destinations?



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™ وافلېچز	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 ایت اوز کوفئی	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 کاکتی	coffee shop	rpmp+j7 qurtubah, riyadh saudi arabia	24.834013	46.735709	4.1	1116.0	NaN	1.972110		coffee_cafe

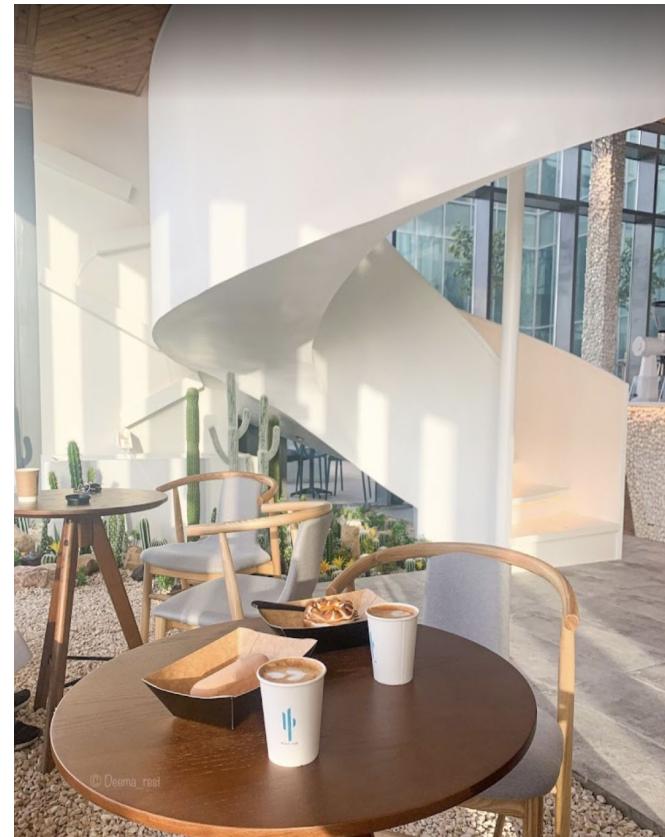
EDA : What are the best destinations?



EDA : What are the best destinations?



EDA : What are the best destinations?



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=True)
```

Out [862]:

	title	category		dist	lat	lng	rating	reviewsCount	price	distance	main_category
902	the 365	restaurant	rp59+87 qurtubah, riyadh saudi arabia	24.808320	46.718294	4.8	67.0	NaN	1.661709		restaurant
819	مطعم تشرين teshrine restaurant	restaurant	rp4p+mh qurtubah, riyadh saudi arabia	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=True)
```

Out [863]:

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

EDA : What are the best destinations?

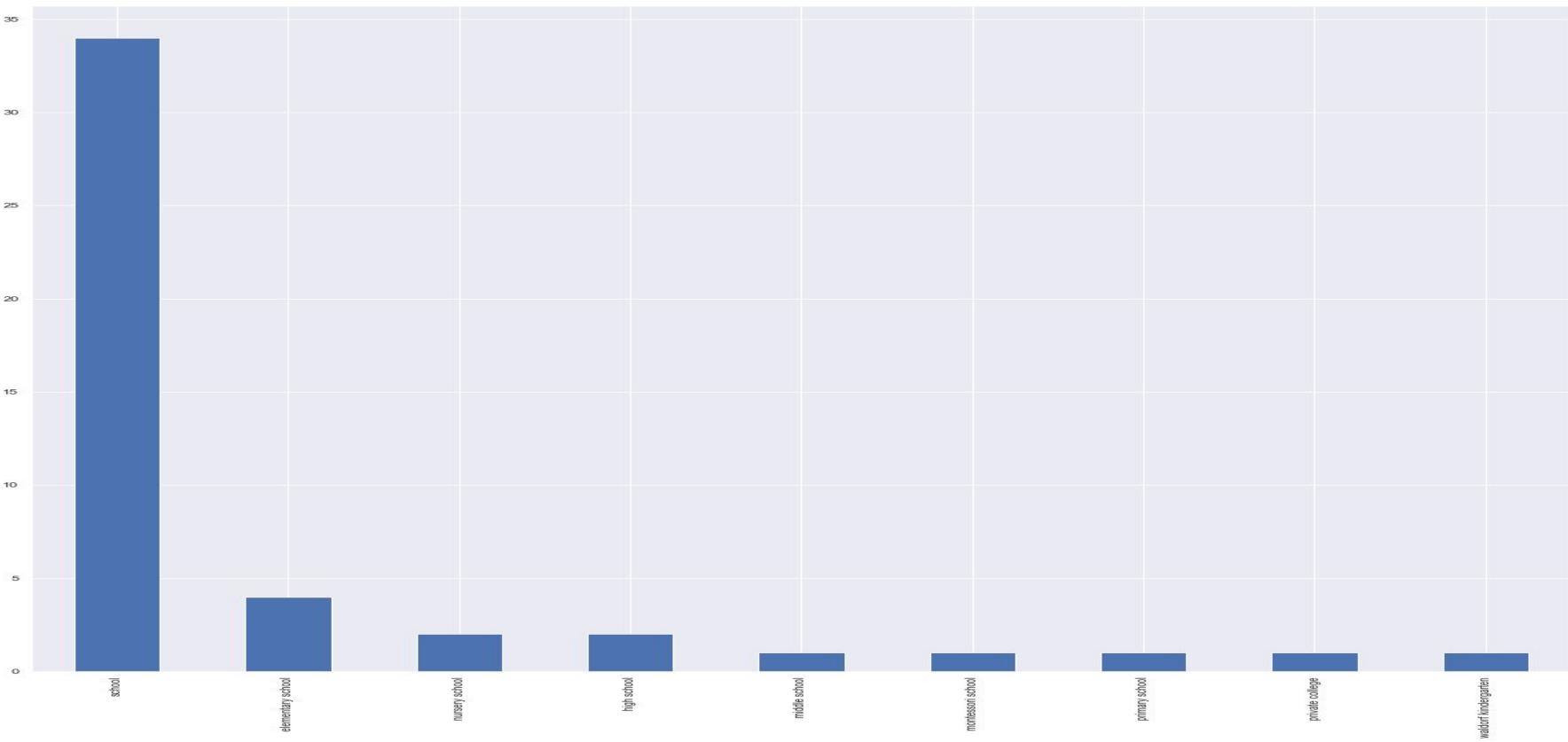


EDA : How family friendly is the neighborhood?

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 :

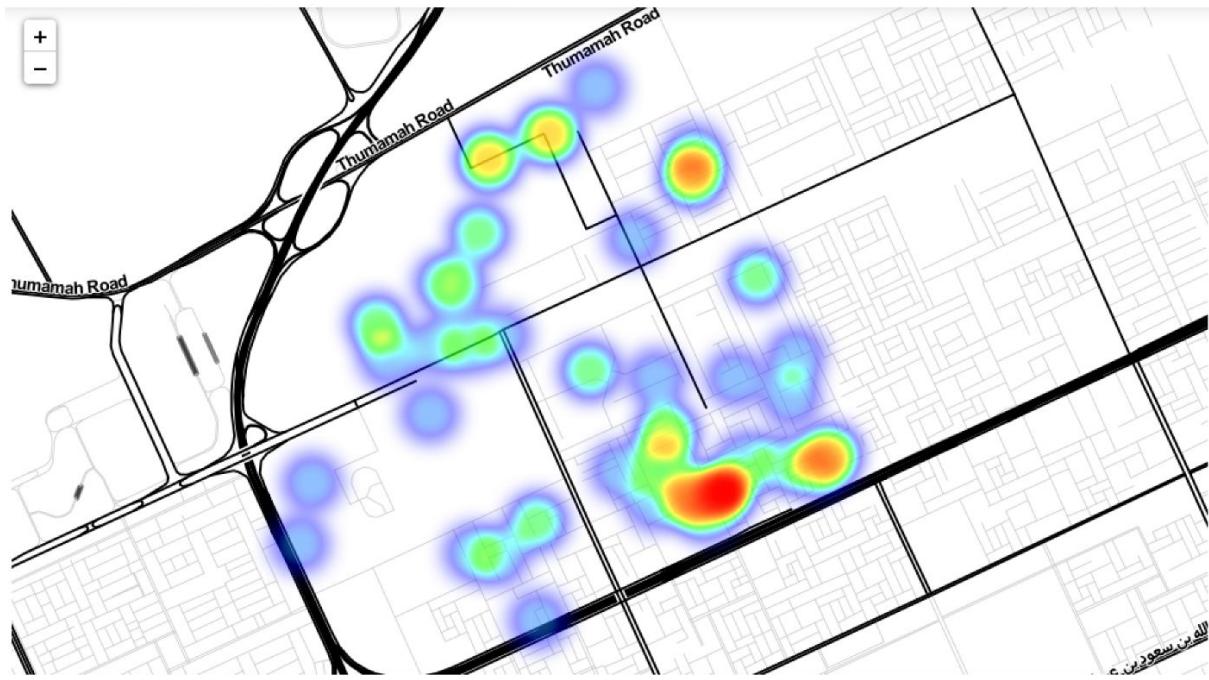
- 1) Good Schools.
- 2) Kid-Friendly Amenities.
- 3) Neighbors (people density).
- 4) Daily Necessities.

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 الوحبيين	school	rphjh+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		حضنة بدايات	nursery school	rp6v+6f qurtubah, riyadh saudi arabia	24.810522	46.743692	4.4	45	NaN	1.359873	school
385		برنامـج الـريـاحـين لـتحـفيـظ الـقـرـآن الـكـرـيم فـرع قرطـبة	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	rpgw+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?

Schools Rating



```
Qs['rating'].mean()
```

3.633333333333333

EDA : How family friendly is the neighborhood?

Kids friendly amenities

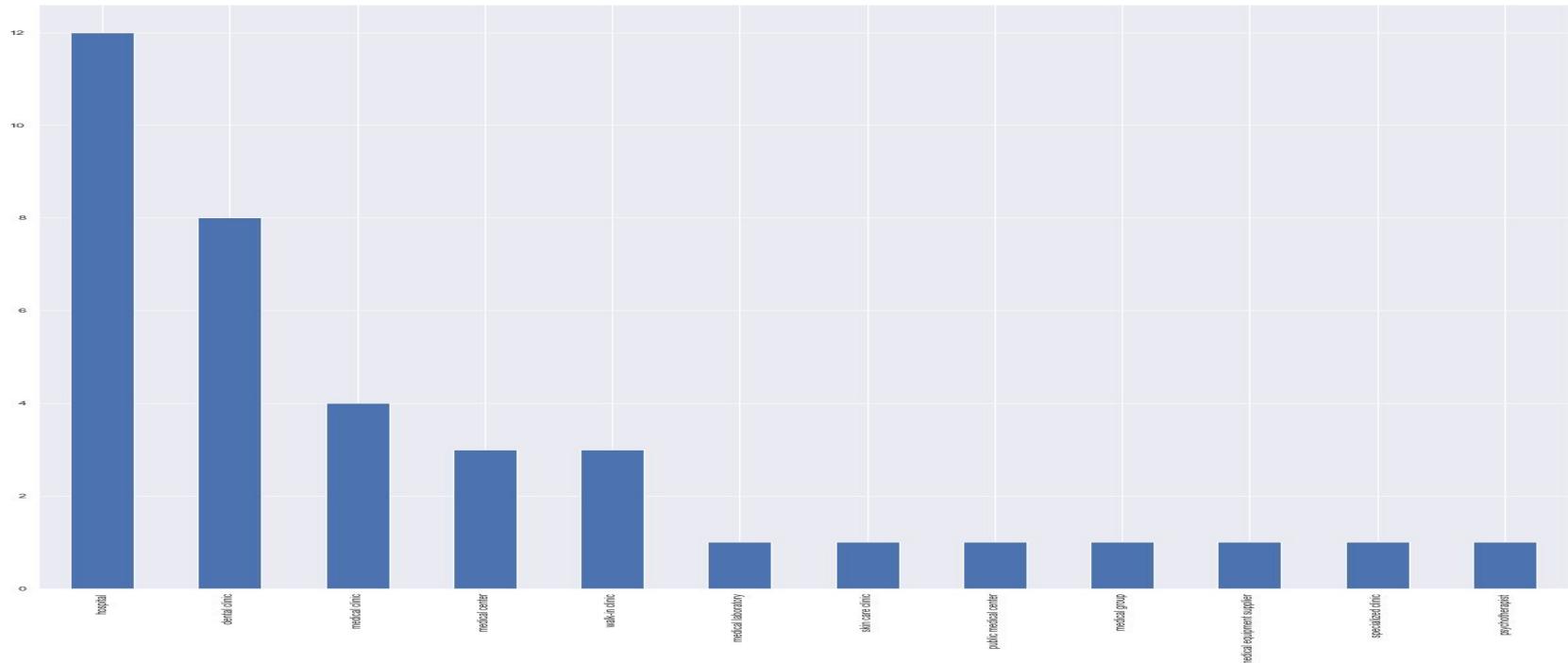
```
In [97]: #parks  
places_qurtubah[places_qurtubah['category']=='park']  
#it's most likely that the data for parks isn't accurate.
```

Out[97]:

		title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
2067	qurtubah walking area		park	qurtubah	24.802411	46.734318	NaN		NaN	NaN	1.594997
2068	qurtubah park		park	qurtubah	24.805671	46.740503	NaN		NaN	NaN	1.487727
2070	ayra park		park	qurtubah	NaN	NaN	NaN		NaN	NaN	NaN

EDA : How family friendly is the neighborhood?

Medical Services



EDA : How family friendly is the neighborhood?

Medical Services rating

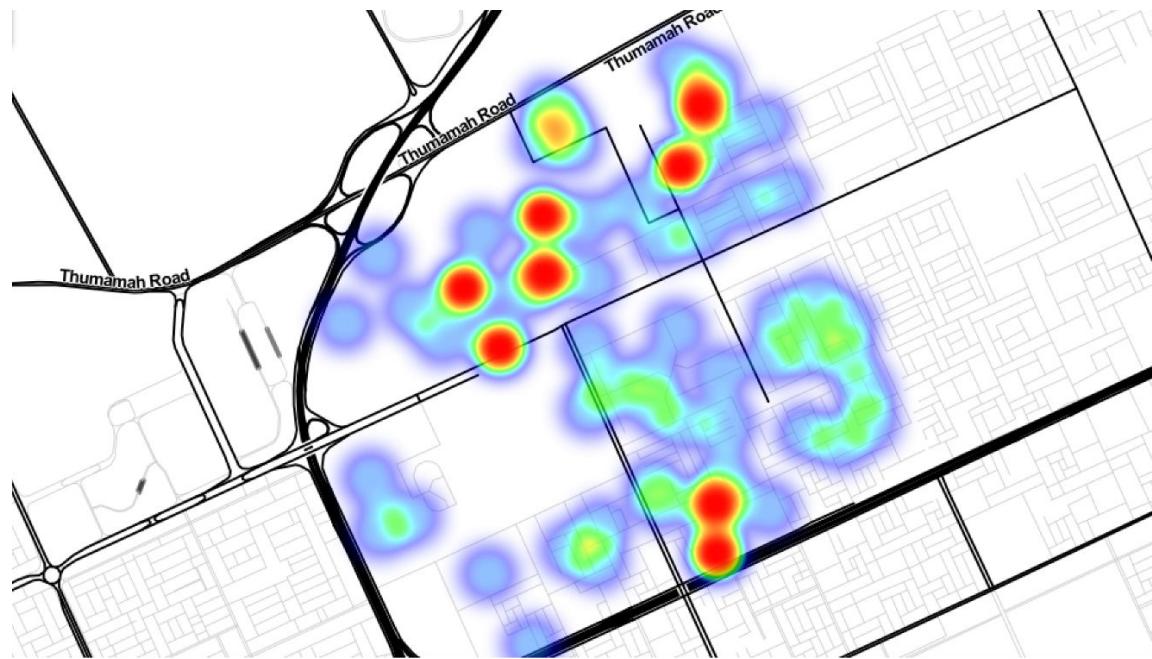
```
In [96]: hospital_rating=hospital_clinic[hospital_clinic['reviewsCount']>=20].sort_values(by='rating', ascending=False)  
hospital_rating
```

Out[96]:

	title	category	dist	lat	lng	rating	reviewsCount	price	distance	main_category
1461	الماهر للحجامة	medical center	rqc2+98 qurtubah, riyadh saudi arabia	24.820973	46.750827	4.9	182.0	NaN	1.961339	hospital_clinic
1424	اضواء الابتسام فرع قرطبة	dental clinic	rp7m+7j qurtubah, riyadh saudi arabia	24.813242	46.734064	4.7	26.0	NaN	0.427625	hospital_clinic
1535	smiles clinic company for dental & skin	hospital	rq42+9w qurtubah, riyadh saudi arabia	24.805936	46.752357	4.4	28.0	NaN	2.372245	hospital_clinic
1478	مجمع عيادات السمو الطبي	dental clinic	rpfh+5p qurtubah, riyadh saudi arabia	24.822969	46.729257	4.2	235.0	NaN	0.760406	hospital_clinic
1516	عيادات المسواك لطب الأسنان - فرع قرطبة	dental clinic	rp3q+2p qurtubah, riyadh saudi arabia	24.802533	46.739328	4.1	54.0	NaN	1.730176	hospital_clinic
1536	bright clinics	skin care clinic	rp2q+ph qurtubah, riyadh saudi arabia	24.801760	46.738961	4.1	472.0	NaN	1.793506	hospital_clinic
1537	مركز قوة الحركة للتاهيل الطبيعي	specialized clinic	rpch+vq qurtubah, riyadh saudi arabia	24.822243	46.729460	4.0	39.0	NaN	0.677820	hospital_clinic
1540	مجمع رنال الطبي	hospital	rq72+cg qurtubah, riyadh saudi arabia	24.813537	46.751251	3.8	158.0	NaN	1.972620	hospital_clinic
1534	leen clinic	medical clinic	rqc2+c7 qurtubah, riyadh saudi arabia	24.821090	46.750687	3.7	117.0	NaN	1.950977	hospital_clinic
1533	sada care medical center	medical center	rq72+g4 qurtubah, riyadh saudi arabia	24.813799	46.750311	3.4	115.0	NaN	1.874168	hospital_clinic
1510	المسواك لطب الأسنان	dental clinic	rpgx+f8 qurtubah, riyadh saudi arabia	24.826131	46.748274	3.3	35.0	NaN	1.954681	hospital_clinic

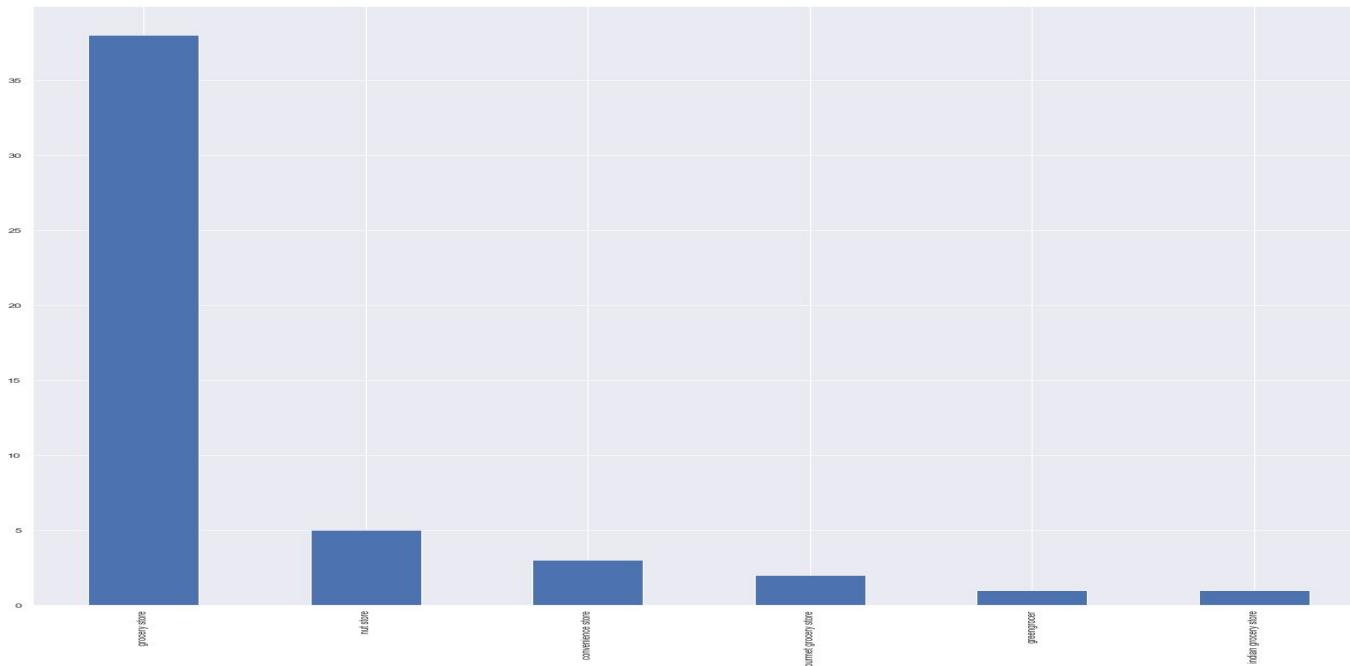
EDA : How family friendly is the neighborhood?

Mosques Density Heatmap

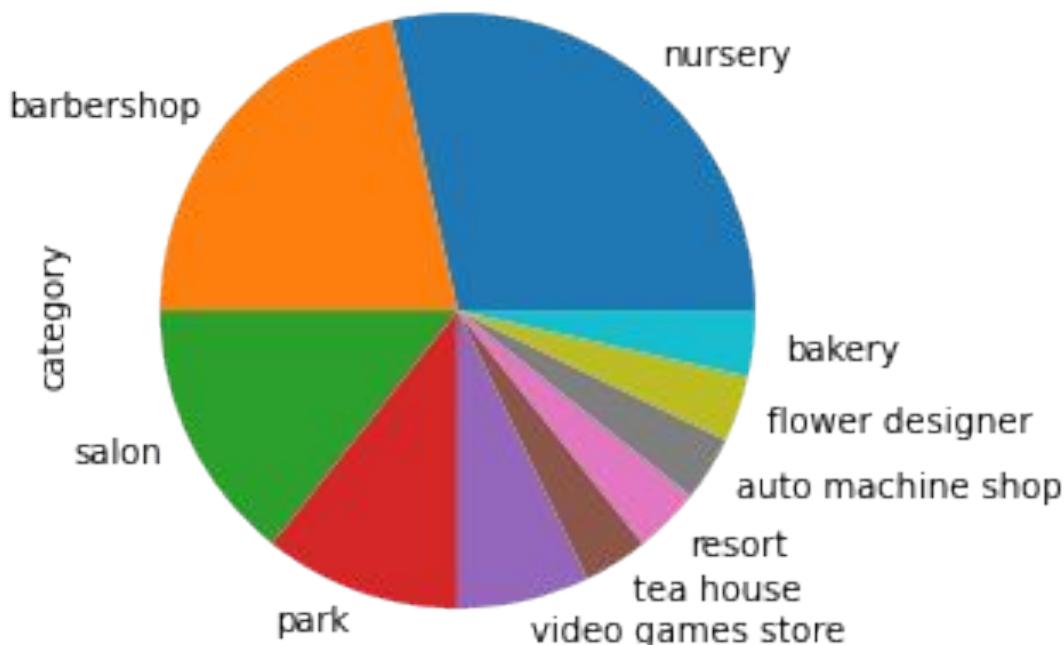


EDA : How family friendly is the neighborhood?

Convenience stores



EDA : How family friendly is the neighborhood?



EDA : How family friendly is the neighborhood?

Good Schools.

Kid-Friendly Amenities.

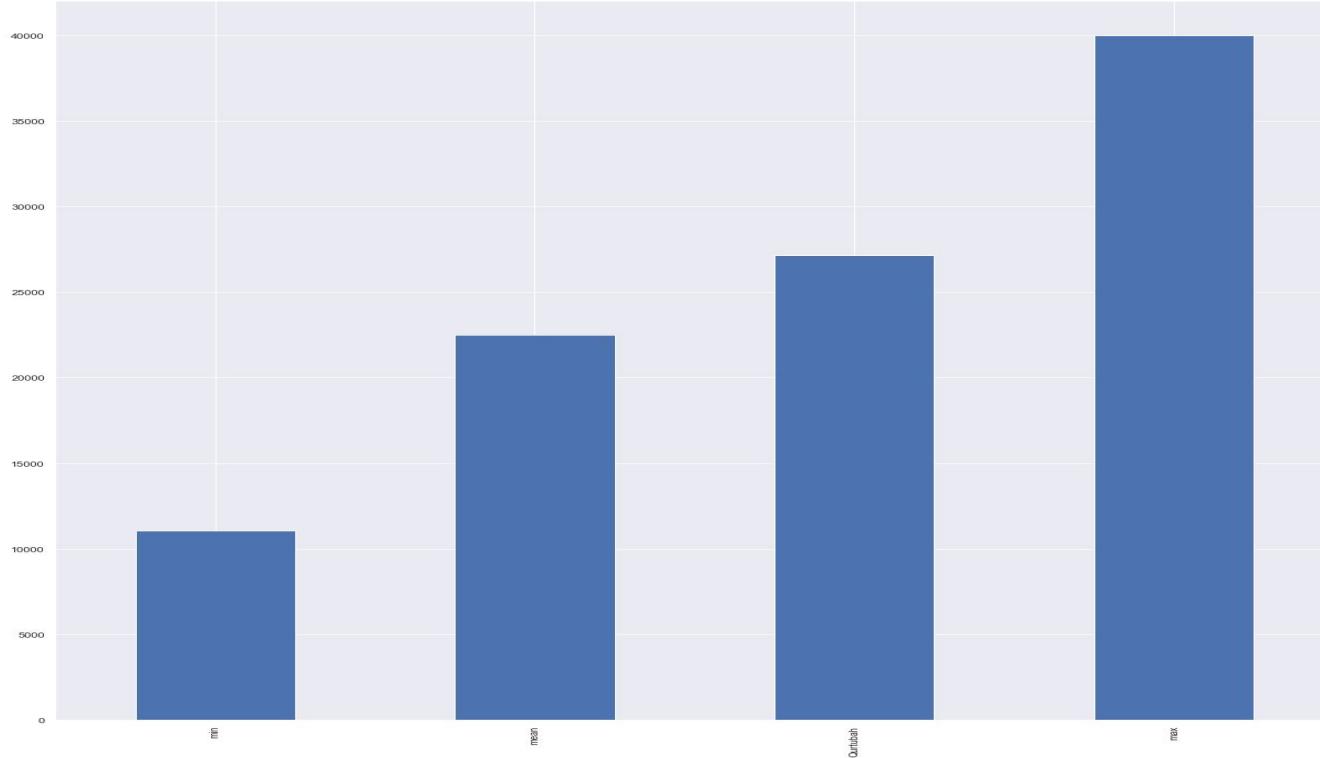
Neighbors (people density).

Daily Necessities.

EDA : How family friendly is the neighborhood?



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



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!**