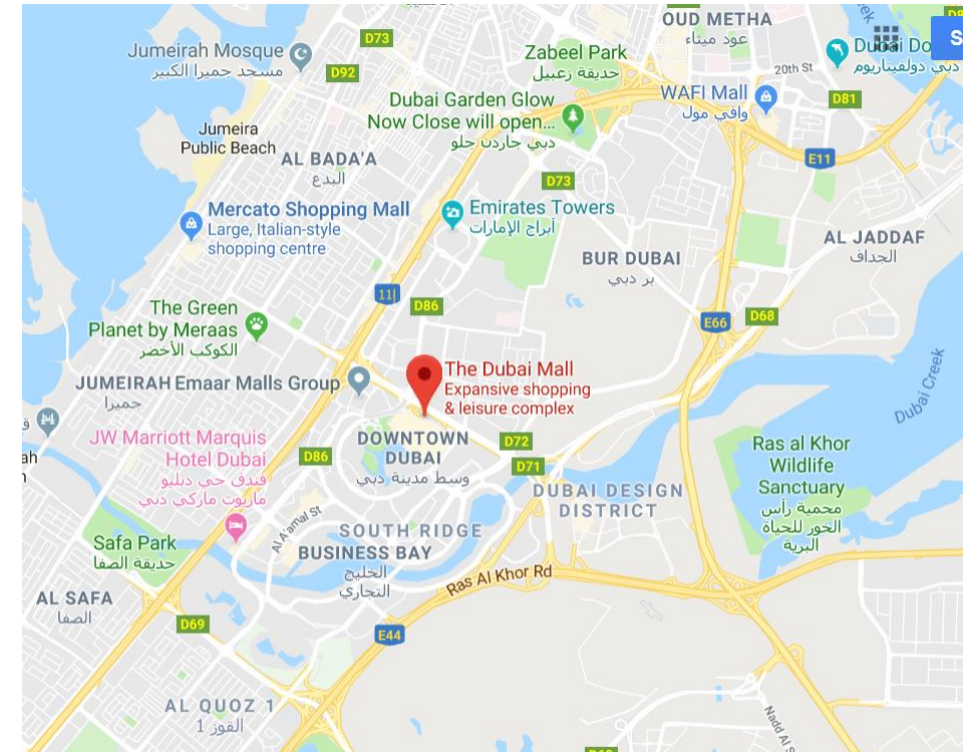




**Recommend Neighborhood to
Open an Indian Restaurant near
Dubai Mall, Dubai**

Background and Business Problem

- Family enterprises running a restaurant business for years in India wish to open a restaurant in Dubai. They possess core Skills in the food industry as well as great supply chain. However to have appropriate footfalls in their restaurant they wish to choose location very wisely.
- Dubai Mall is considered to be center of Dubai and considering the overall footfall there, they wish to open a restaurant near Dubai Mall. However the family is not entirely sure of the neighborhood they should opt for.
- Thus they have assigned a project to me to analyze neighborhoods in the area surrounding Dubai Mall within radius of 10 Kms to zero down on best place to open a restaurant.
- In this project we will try to find an optimal location for a restaurant. Specifically, this report will be targeted to stakeholders interested in opening an Indian restaurant in Dubai, UAE.



Data and Criteria

- Since there are lots of restaurants in Dubai we will try to detect locations that are not already crowded with restaurants. We are also particularly interested in areas with no Indian restaurants in vicinity. We would also prefer locations as close to city center as possible, if first two conditions are met.
- We will use our data science powers to generate a few most promising neighborhoods based on this criteria. Advantages of each area will then be clearly expressed so that best possible final location can be chosen by stakeholders.

Based on definition of our problem, factors that will influence our decision are:

- Number of existing restaurants in the neighborhood (any type of restaurant)
- Number of and distance to Indian restaurants in the neighborhood, if any
- Distance of neighborhood from city center

We decided to use regularly spaced grid of locations, centered around city center, to define our neighborhoods.

Following data sources will be needed to extract/generate the required information:

- Centers of candidate areas will be generated algorithmically and approximate addresses of centers of those areas will be obtained using Google Maps API reverse geocoding
- Number of restaurants and their type and location in every neighborhood will be obtained using Foursquare API

Current Restaurants Near Dubai Mall and their Neighborhood

dataframe_filtered

4]:

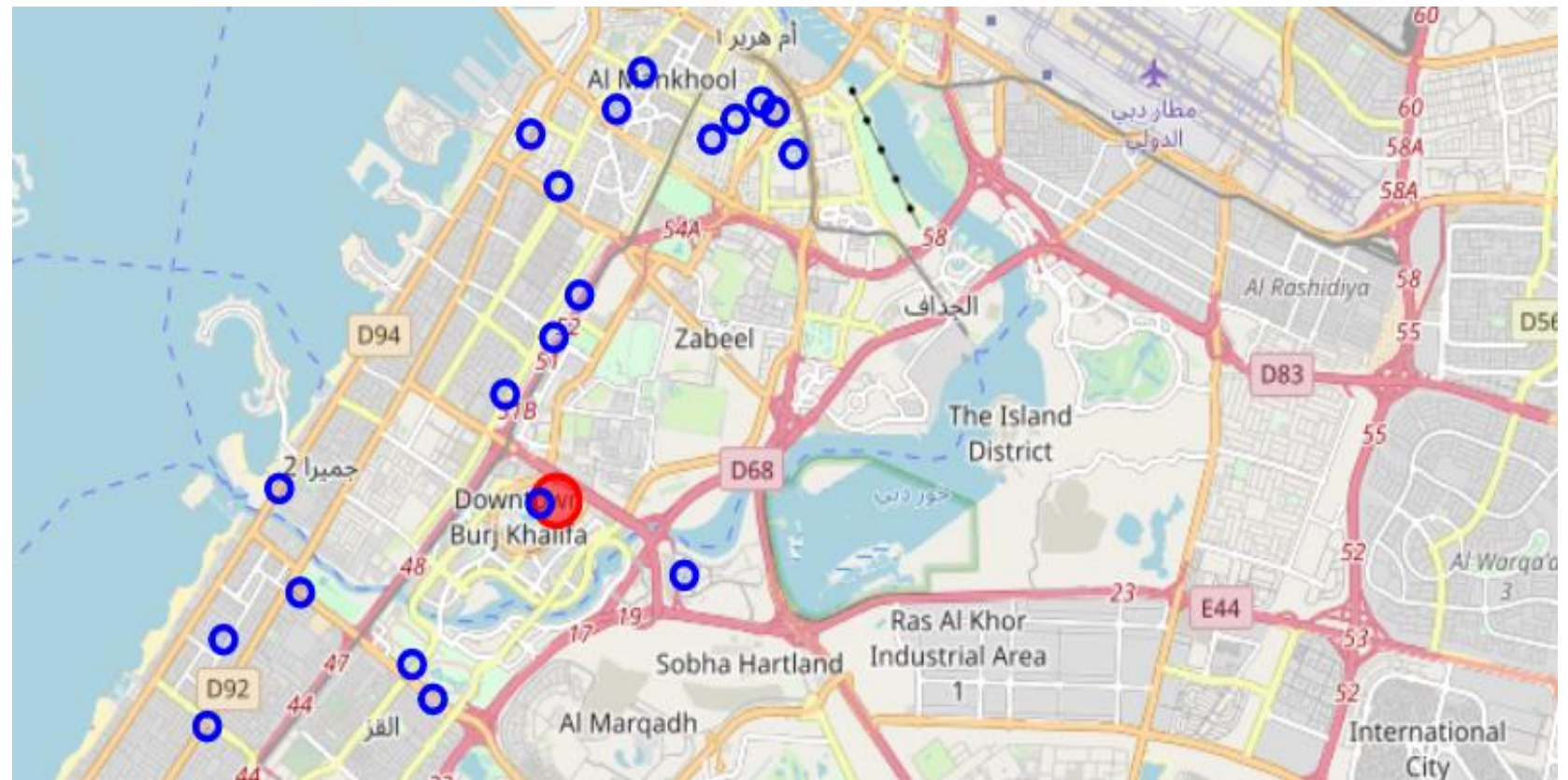
	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress	labeledLatLngs	lat	lng	neighborhood	state	id
0	Mohalla Indian Street Food	Indian Restaurant	Dubai Design District D3	AE	دبي	الإمارات العربية المتحدة		2159	[Dubai Design District D3, دبي, الإمارات العرب...	[[{"lng": 55.297947, "lat": 25.18795, "label": "...	25.187950	55.297947	Za'abeel	دبي	5be56ba5646e38002c6fb889
1	India Palace Express	Indian Restaurant	The Dubai Mall	AE	دبي	الإمارات العربية المتحدة		245	[The Dubai Mall, دبي, الإمارات المتحدة]	[[{"lng": 55.276635557856295, "lat": 25.1967200...]	25.196720	55.276636		دبي	4b99106ff964a520fb5e35e3
2	Metro Grand Indian Restaurant	Asian Restaurant		NaN	دبي	الإمارات العربية المتحدة		1660	[دبي, الإمارات العربية المتحدة]	[[{"lng": 55.27153493265844, "lat": 25.21037743...]	25.210377	55.271535		دبي	548130c6499e82fa71d319e4
3	Lazeez Indian Cuisine	Indian Restaurant	Wasi Square	AE	دبي	الإمارات العربية المتحدة	Safa Park Road	4022	[Wasi Square (Safa Park Road), دبي, الإمارات ا...	[[{"lng": 55.241163, "lat": 25.185643, "label": "...]	25.185643	55.241163		دبي	5a0f13df1755622302f4fe6d
4	Indian Handy Craft	Arts & Crafts Store		NaN	AE	NaN		3103	[الإمارات العربية المتحدة]	[[{"lng": 55.257954, "lat": 25.176758, "label": "...]	25.176758	55.257954		NaN	5016c225e4b0ad6ab3c135f0
5	Gazebo Indian cuisine DIFC	Indian Restaurant		NaN	AE	NaN		2290	[الإمارات العربية المتحدة]	[[{"lng": 55.278635, "lat": 25.217665, "label": "...]	25.217665	55.278635		NaN	56df0c60498e77585c2fb553
6	The Indian Pavillion	Indian Restaurant	Safa Spinneys	AE	دبي	الإمارات العربية المتحدة		6045	[Safa Spinneys, دبي, الإمارات المتحدة]	[[{"lng": 55.22764292218067, "lat": 25.16905078...]	25.169051	55.227643		دبي	4b5beabef964a520261d29e3
7	Indian Movie Night!	Other Nightlife		NaN	AE	دبي		5295	[دبي, الإمارات العربية المتحدة]	[[{"lng": 55.23011502071296, "lat": 25.17967670...]	25.179677	55.230115		دبي	4eeb67842c5beea6206a19e
8	Our Own Indian School	College Academic Building		NaN	AE	NaN		3313	[الإمارات العربية المتحدة]	[[{"lng": 55.26103777113154, "lat": 25.17217907...]	25.172179	55.261038		NaN	4f8a78d8e4b055d230f14cd
9	Indian Barber Shop	Salon / Barbershop	Karama Bus Station 7333	AE	دبي	الإمارات العربية المتحدة	Al Karama Fish Market	5567	[Karama Bus Station 7333 (Al Karama Fish Marke...	[[{"lng": 55.30212161437806, "lat": 25.24253264...]	25.242533	55.302122		دبي	4f3755dae4b0a1ff196cb3b16
10	Indian passport and visa services center	None	Near GPO	AE	الكرامة	الإمارات العربية المتحدة	Umm Hureir Road	6343	[Near GPO (Umm Hureir Road), الكرامة الإمارات]	[[{"lng": 55.311326, "lat": 25.246021, "label": "...]	25.246021	55.311326		دبي	4c455c622d3ec9b61e2830ae

```

Out[35]: 0      Mohalla Indian Street Food
         1      India Palace Express
         2      Metro Grand Indian Restaurant
         3      Lazeez Indian Cuisine
         4      Indian Handy Craft
         5      Gazebo Indian cuisine DIFC
         6      The Indian Pavillion
         7      Indian Movie Night!
         8      Our Own Indian School
         9      Indian Barber Shop
        10      Indian passport and visa services center
        11      Jashan Indian Restaurant
        12      Indian Summer
        13      Little Hut Indian Restaurant
        14      Sapne Indian Cuisine
        15      Pathans South Indian Restaurant, Satwa Round-a...
        16      Temptation Indian Grills & Curries
        17      Global indian international School
        18      Claypot - Indian Cuisine
        19      India Club
Name: name, dtype: object

```


Density of the
restaurants
with respect to
the
Neighborhood



- From above map we see that near Dubai Mall, there is maximum density of the Indian Restaurants in Zabeel and thus it is not advisable to start restaurant there .

Lets look at density of Indian Venues near Zabeel

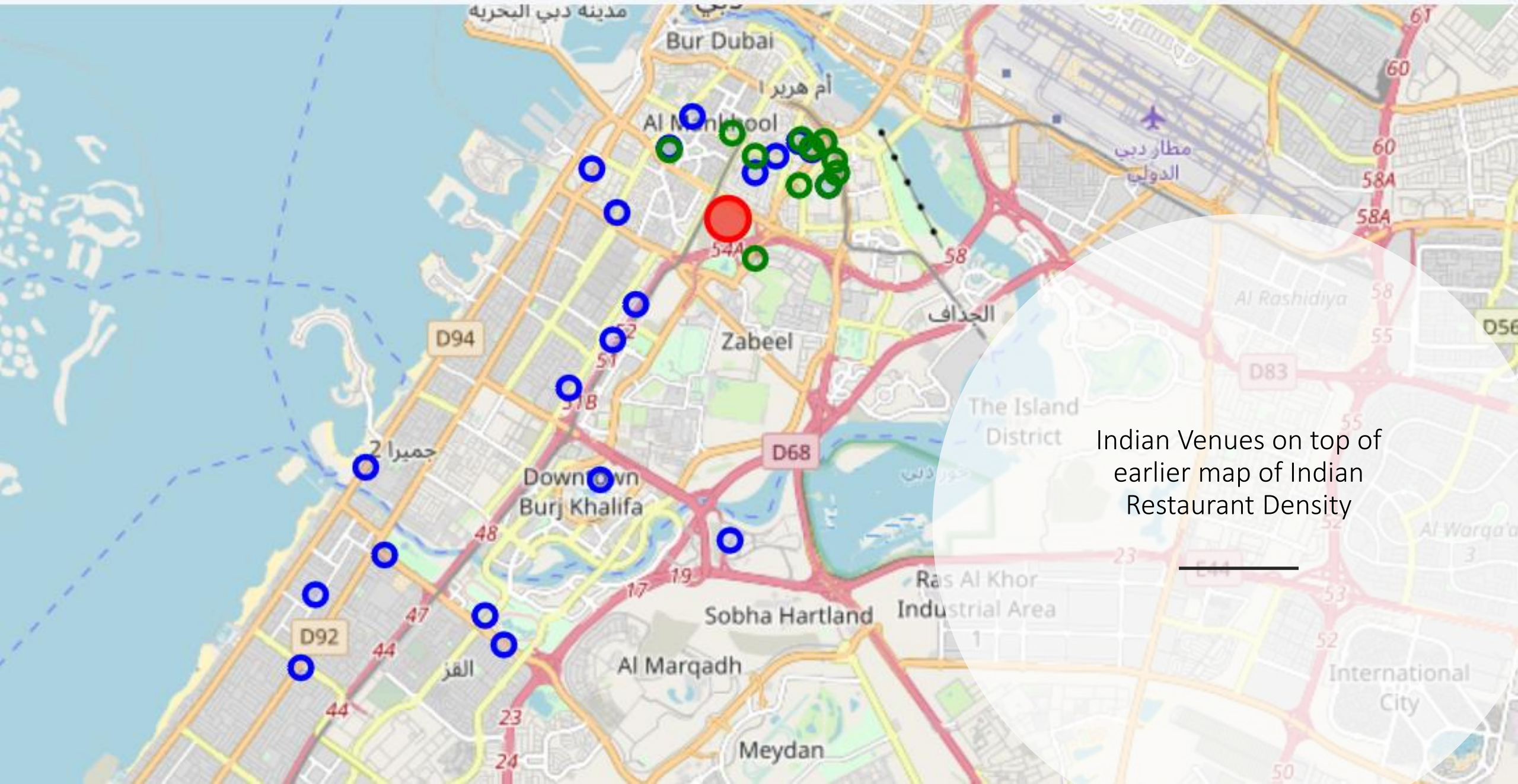
```
dataframe_filtered2 = dataframe_filtered1[dataframe_filtered1.categories != 'Indian Restaurant']
dataframe_filtered2
```

Out[176]:

	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress	labeledLatLngs	lat	lng	postalCode	state
2	Indian Barber Shop	Salon / Barbershop	Karama Bus Station 7333	AE	دبي	الإمارات العربية المتحدة	Al Karama Fish Market	876	[Karama Bus Station 7333 (Al Karama Fish Marke...	[[{"lng": 55.30212161437806, "lat": 25.24253264...	25.242533	55.302122	NaN	دبي 4f37f
3	Indian Overseas Bank	Bank	Mohd. Sultan Belshalat Building	AE	دبي	الإمارات العربية المتحدة	Community 318, Street 6a	1236	[Mohd. Sultan Belshalat Building (Community 31...	[[{"lng": 55.301937103271484, "lat": 25.2461738...	25.246174	55.301937	NaN	دبي 5331
6	The Indian High School	High School	Oud Metha	AE	دبي	الإمارات العربية المتحدة	NaN	1879	[Oud Metha, دبي, الإمارات العربية المتحدة]	[[{"lng": 55.31556818954254, "lat": 25.24065952...	25.240660	55.315568	NaN	دبي 4cef4
7	Indian passport and visa services center	None	Near GPO	AE	الكرامة	الإمارات العربية المتحدة	Umm Hureir Road	1785	[Near GPO (Umm Hureir Road), الكرامة, الإمارات...	[[{"lng": 55.311326, "lat": 25.246021, "label": "...	25.246021	55.311326	NaN	دبي 4c455
8	Indian Visa Centre	None	Karama	AE	NaN	الإمارات العربية	NaN	1841	[Karama, الإمارات العربية المتحدة]	[[{"lng": 55.309511, "lat": 25.248379, "label": "...	25.248379	55.309511	NaN	NaN 4cf33

In [177]: `dataframe_filtered2.name`

```
Out[177]: 2          Indian Barber Shop
          3          Indian Overseas Bank
          6          The Indian High School
          7  Indian passport and visa services center
          8          Indian Visa Centre
          10         Indian High School ground
          11         Indian Embassy
          12  Global indian international School
          17  Mohabbat Indian Night Club
          18  Mirchi Indian Restaurant
          22         India Club
          Name: name, dtype: object
```

Indian Venues on top of
earlier map of Indian
Restaurant Density



Conclusion

We recommend to start restaurant in Zabeel neighborhood near Dubai Mall