

The Battle Of Neighborhoods

Riyadh City - KSA

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Introduction

- ▶ Investors always want to invest their money wisely. In our case an investor comes to us in order to help him make decision in his investment to open a restaurant in Riyadh and he is looking for the best Specialty (Indian, Arabian, Italian) and the best location for the restaurant
- ▶ We will try to analyze the available data in order to determine the underserved Locations with restaurants and pick the right specialty and location.

Data

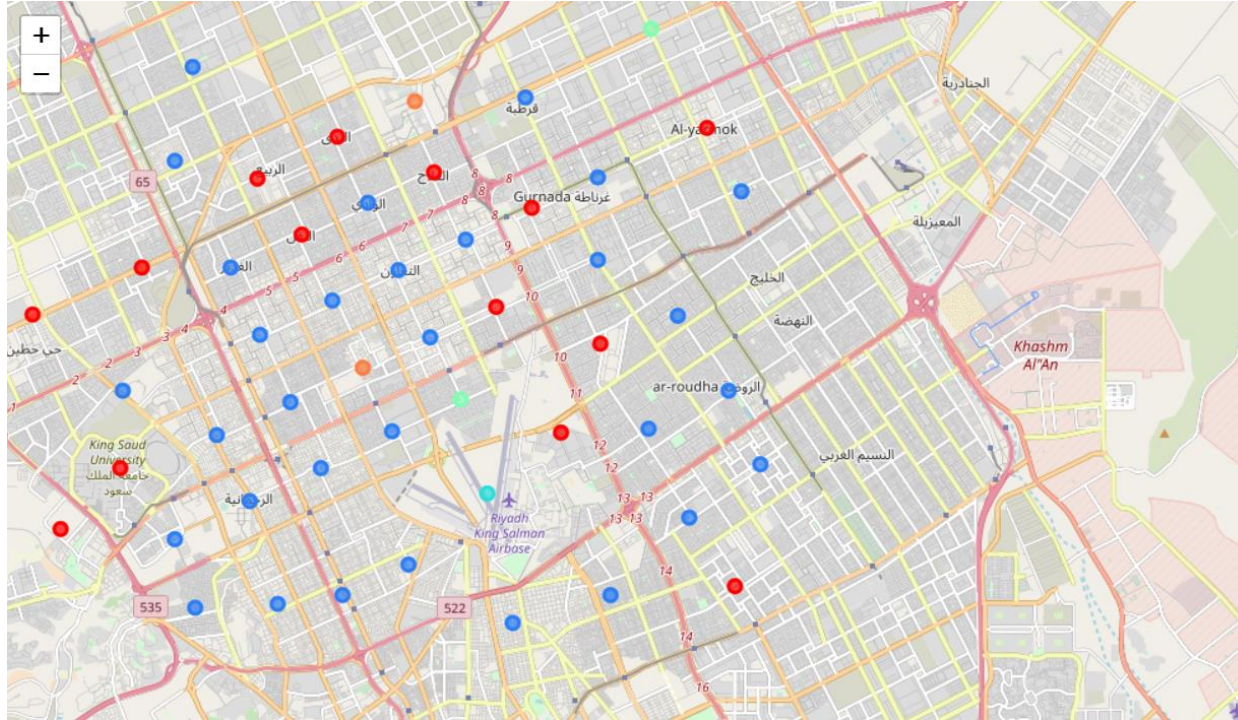
- ▶ The data used for this project will be acquired from the Saudi Post website (<http://maps.address.gov.sa/>)
- ▶ The datasets consists of the neighborhood of Riyadh City with
 - ▶ Neighborhood Arabic Name
 - ▶ Neighborhood English Name
 - ▶ Coordinates of the neighborhood centroid
- ▶ We will use Selenium for scraping the content

Methodology

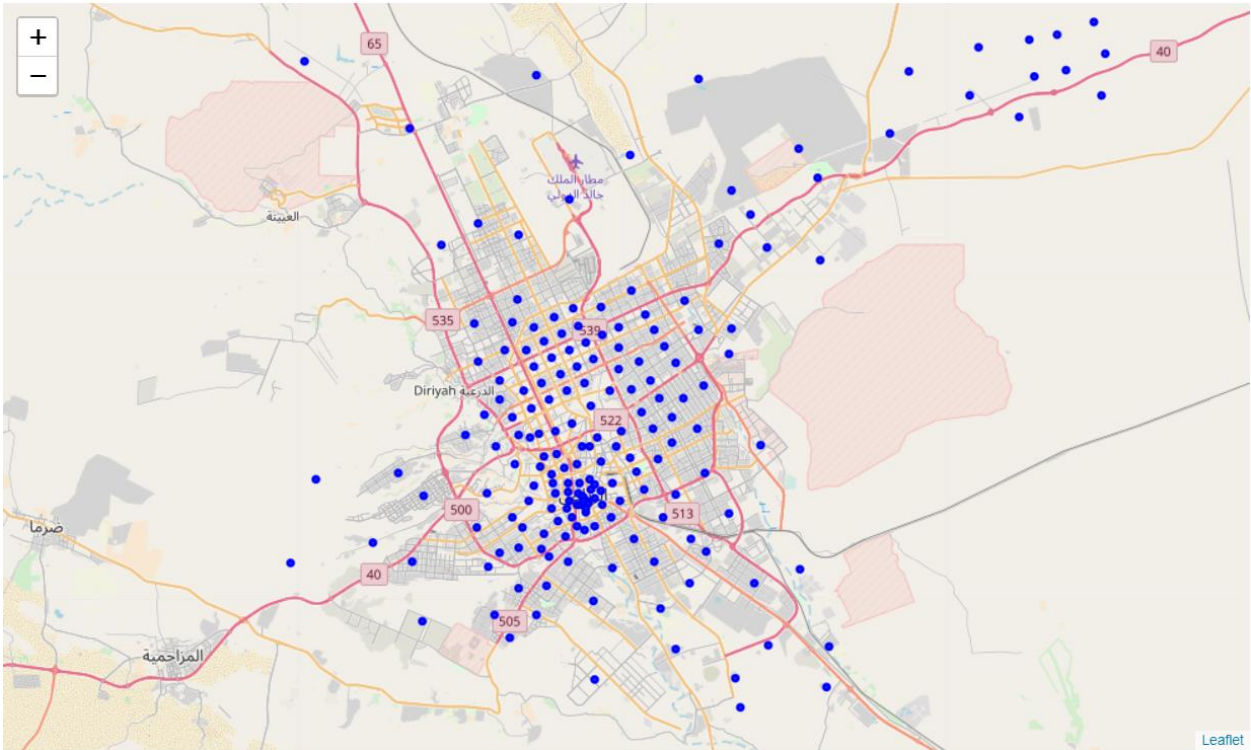
- ▶ Collect the neighborhoods of Riyadh city with their locations by scraping a website (<http://maps.address.gov.sa/>) by using Selenium as web scraping tool
- ▶ Collect the neighborhoods top venues using Foursquare API Search
- ▶ Form neighborhood clusters based on venue categories using unsupervised k-means clustering algorithm
- ▶ Determining the Top venues for each neighbourhood
- ▶ Perform a gap analysis to pick the suitable neighbourhood for opening the restaurant

Results

- There are 192 neighborhoods in Riyadh City with below details
- Study Area: North of Riyadh with only 54 neighborhoods
- We split the neighborhoods into 7 clusters



Results



	Neighborhood	Longitude	Latitude
0	Al Amal Dist.	46.722685627004	24.6459195903011
1	Al Namudhajiyyah Dist.	46.6946166553506	24.6568510439173
2	Al Jarradiyyah Dist.	46.6977718129774	24.6170344142602
3	Al Sinaiyyah Dist.	46.7472157321497	24.6423874000809
4	Manfuha Al Jadidah Dist.	46.7184625177832	24.6127734900076
5	Al Fakhiriyyah Dist.	46.6828304585185	24.6416215786556
6	Al Dirah Dist.	46.7100971796142	24.6323003457292
7	East Umm Al Hamam Dist.	46.6580446242283	24.686458280081
8	Al Sharafiyyah Dist.	46.668830074744	24.658654035955
9	Al Hada Dist.	46.6406819928868	24.6607399084176

Results

Cluster6: 1 neighborhood

	Neighborhood	Latitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
50	Al Narjis Dist.	\$24.88684	5	Hookah Bar	Women's Store	Event Service	Food & Drink Shop	Flower Shop	Fish Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm

Discussion

- ▶ Cluster analysis gives us the same neighborhoods venues and group them Together.
- ▶ Investors always search for the opportunities where there is scarcity of the service so they can fill the gap.
- ▶ The best location for a new restaurant will be in underserved (Restaurant service) neighborhoods
- ▶ If we take a look in our 7 clusters, we note that **cluster6** which has 1 Neighborhood (Al Narjis) has restaurants as the 8th Most Common Venue.
- ▶ We can say that this neighborhood is a good place to open a restaurant.
- ▶ Our analysis will be more robust if we have other data like census data, with census data we will have additional features like number of restaurant by certain number of people and then more accuracy to do gap analysis

Conclusion

- ▶ In our study we fetched the list of Riyadh neighborhood by scraping the address website and determined the top venues for each neighborhood and cluster them together
- ▶ By performing a gap analysis we found that the most suitable location for opening a new restaurant is cluster6