


Restaurant Location in New Orleans

Using Clustering
in Python to
Assist in
Restaurant
Location
Selection



How can data science assist in selecting a restaurant location?

- Find similar neighborhoods by clustering
- Quantitative Models
- Charts, graphs, and maps to make data more accessible



Finding a good neighborhood for a restaurant in New Orleans

- This project used clustering to find similar neighborhoods in New Orleans
- The clusters were analyzed for similarities
- Analysis of the clusters revealed neighborhoods with not much businesses, rather than neighborhoods with good locations.



Data

- A table of neighborhoods in New Orleans was scraped from Wikipedia (https://en.wikipedia.org/wiki/Neighborhoods_in_New_Orleans)
- FourSquare data was used for analysis

Gathering the data

- A table was scraped from Wikipedia by using the Beautiful Soup package in Python

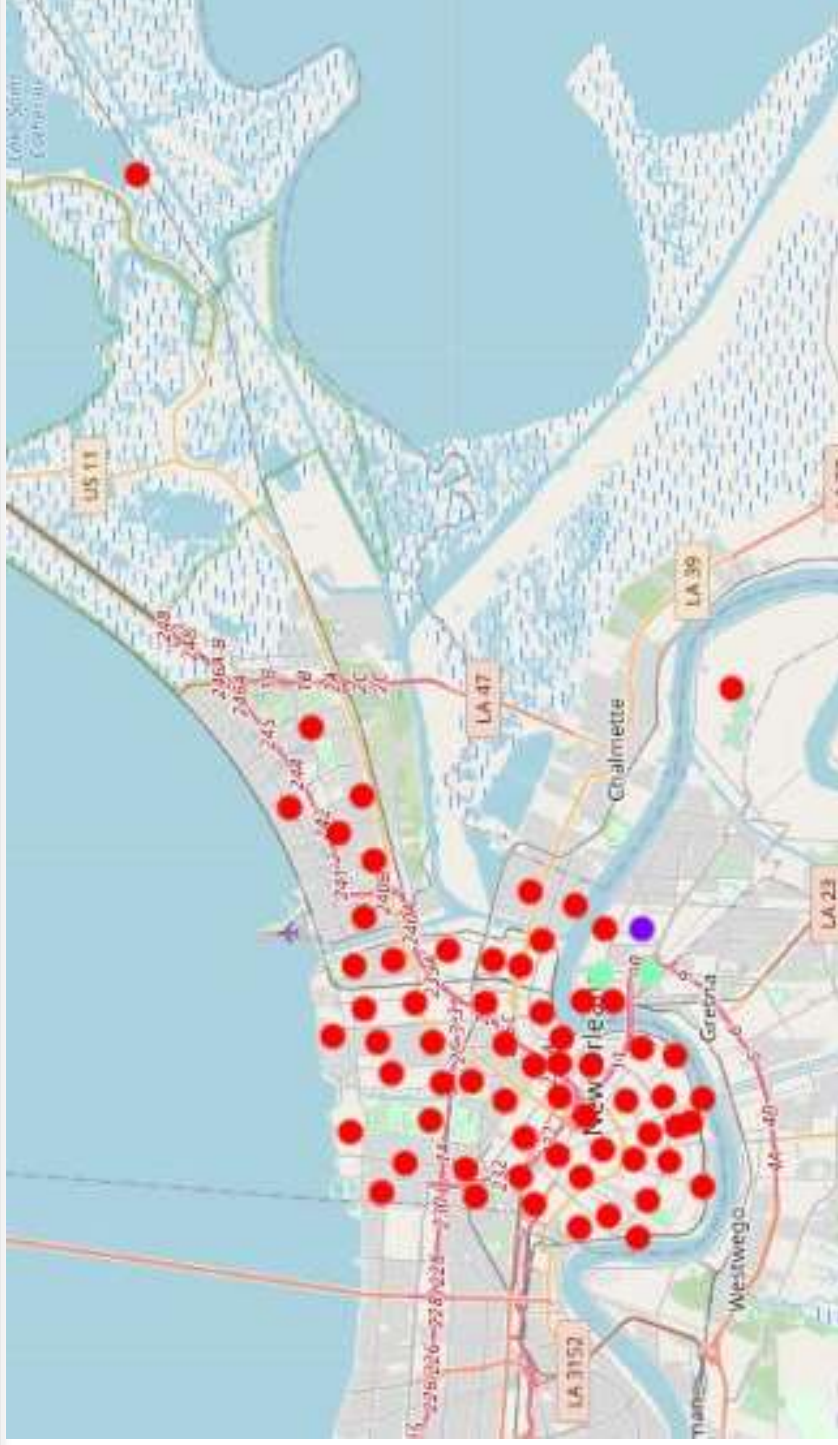
```
[7]:
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	Neighborhood	Longitude	Latitude
0	U.S. NAVAL BASE	-90.026093	29.946085
1	ALGIERS POINT	-90.051606	29.952462
2	WHITNEY	-90.042357	29.947200
3	AUDUBON	-90.121450	29.932994
4	OLD AURORA	-90.000000	29.924440

Mapping the New Orleans Neighborhoods



K-Means Clustering (Three Clusters)



Cluster 0

Desire Area

	Venue	Frequency
1	Skate Park	1.0
2	Accessories Store	0.0
3	New American Restaurant	0.0
4	Nightclub	0.0
5	Nightclub Spot	0.0

Cluster 0 Analysis

- Cluster 0 was a neighborhood called the Desire Area.
- Skate park, no businesses
- Population of 2500
- 11th most dangerous neighborhood in New Orleans
- Not the ideal location for a restaurant

Cluster 1 Analysis

- Includes 71 Neighborhoods
- Not much shared in common
- Much more promising locations than cluster 0 or cluster 2.
- Recommended to explore further the locations found in this cluster

Cluster 2

Pontchartrain Park

	Venue	Frequency
1	Park	1.0
2	Accessories Store	0.0
3	Pharmacy	0.0
4	New American Restaurant	0.0
5	Nightclub	0.0


Lakeshore-Lake Vista

	Venue	Frequency
1	Harbor/ Marina	0.5
2	Park	0.5
3	Pharmacy	0.0
4	New American Restaurant	0.0
5	Nightclub	0.0




Cluster 2 Analysis

- Area with small population
- No businesses that are visible on Foursquare
- Not recommended to locate a restaurant here



Results

- Cluster 0 and 2 were not great areas to locate a restaurant due to low populations, and minimal surrounding businesses
- Cluster 1 is more promising, but requires further analysis to narrow down a specific area



Conclusion

- Data science can be used to assist in decision making processes
- Clustering can be used to find similarities in data
- Data analysis can eliminate poor options quickly and can provide additional information that makes coming to a business decision easier and less risky