

Mexican Restaurant in Berlin

By David Briones

Introduction

- People love restaurants, and interestingly, restaurants are good for the economy, but they are also risky.

The Problem

- Restaurants are risky to start.
- Finding the right location can be incredibly difficult, particularly in a city so big as Berlin.
- Choosing the wrong location will be very costly for a restaurant, and it might cause the restaurant to fail.

Data

- A list of neighborhoods or localities or Berlin
- Latitude and longitude of these localities
- Location data regarding restaurants within these localities.

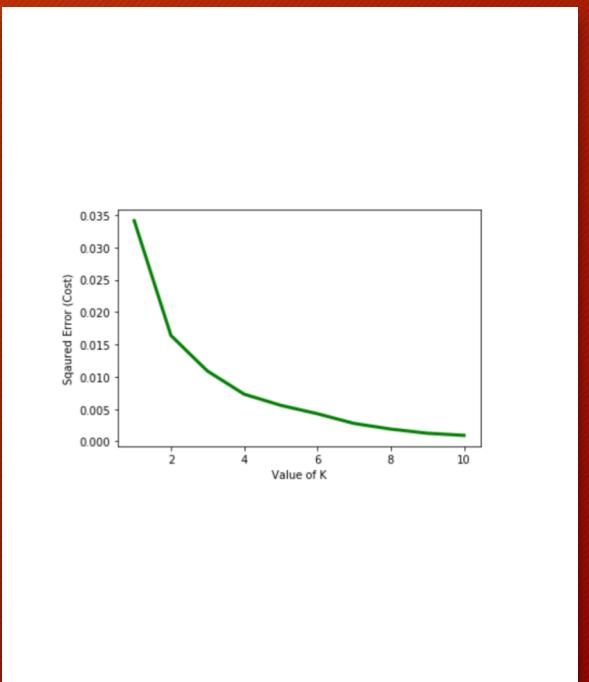
(96, 1)	
[37] :	Locality
0	Adlershof
1	Alt-Hohenschönhaus
2	Alt-Treptow
3	Altglienick
4	Baumschulenweg

(96, 3)			
	Locality	Latitude	Longitude
0	Adlershof	52.43779	13.54778
1	Alt-Hohenschönhaus	52.54706	13.50055
2	Alt-Treptow	52.49350	13.45711
3	Altglienick	52.42006	13.53969
4	Baumschulenweg	52.46669	13.48840

(7170, 7)						
	Locality	Latitude	Longitude	VenueName	VenueLatitude	VenueLongitude
0	Adlershof	52.43779	13.54778	Mia Toscana	52.438327	13.549573
1	Adlershof	52.43779	13.54778	Griechisches Restaurant Athen	52.434901	13.546680
2	Adlershof	52.43779	13.54778	McFIT	52.431000	13.549495
3	Adlershof	52.43779	13.54778	Food - Taste of the world on the road	52.428786	13.538168
4	Adlershof	52.43779	13.54778	Schloss Köpenick	52.443679	13.572549
						Palace

Methodology

- K-Means algorithm
- Create clusters using $K= 4$
- Determine which areas have a lot of restaurants, but not many Mexican Restaurants.



Results

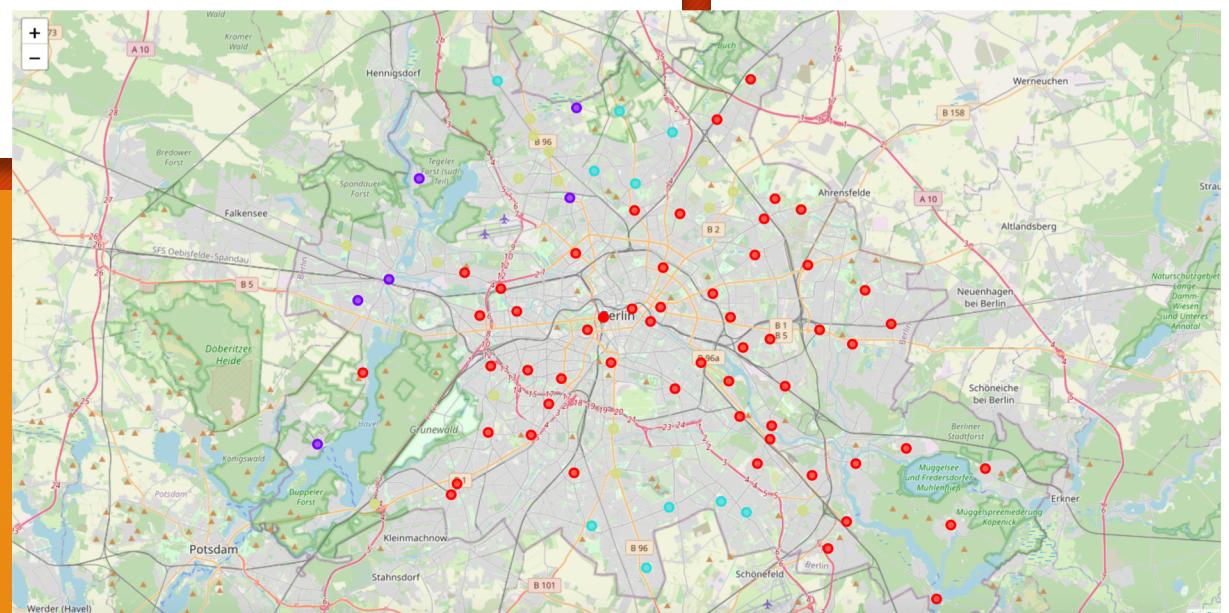
- Cluster 0 worse for opening a Mexican Restaurant: not many restaurants.
- Cluster 1 best for opening a Mexican Restaurant: lots of restaurants, but no Mexican restaurants.
- Clusters 2 and 3 were in the middle.
- Recommend owners to take a look at localities within cluster 1 to choose location.

Mean

[111]:	Restaurant	Mexican Restaurant	Latitude	Longitude
Cluster				
0	0.002988	0.001855	52.523811	13.393708
1	0.053982	0.000000	52.548920	13.242435
2	0.019075	0.030303	52.510153	13.406552
3	0.025796	0.001912	52.532572	13.345242

Median

[112]:	Restaurant	Mexican Restaurant	Latitude	Longitude
Cluster				
0	0.000000	0.000000	52.510040	13.435410
1	0.050405	0.000000	52.555160	13.214570
2	0.021568	0.031754	52.503685	13.408045
3	0.025000	0.000000	52.558770	13.332830



Discussion

- There are two main things that I must acknowledge, and I would like to consider during a much longer and in-depth study.
 - First, I would like to consider whether a type of restaurant that is successful in one area is related to another type of restaurant being successful as well.
 - Secondly, I must acknowledge that simply because an area has a lot of restaurants, it does not necessarily mean that other restaurants will do well there. For my next project, I would like to only choose certain neighborhoods that have the right environment for the specific restaurant in question.

Conclusion

- Overall, I believe that the project was successful and that we were able to identify a few areas that might be worth looking into as a location for Avo-Cado. I would recommend the owners to start by taking a look at the localities within cluster 1 and start examining which ones fit the theme and the style of the restaurant better. We could then have another study to determine which area would be the most profitable and further determine the eligibility of a locality.