

Open a Mexican Restaurant



IBM Applied Data Science Specialization

Capstone Project

Author: Norma Ruiz

Definition of the problem

- I am going to open another Mexican Restaurant(Oaxacan Food) in Mexico City.
- I want to find neighbourhoods in specific districts of Mexico City that have the same places of interest (venues) as those in the neighbourhood where my first restaurant is located.

Ciudad de México

División delegacional



Current
neighbourhood:
Benito Juárez
Mexico City

Candidate neighbourhoods



Cuauhtemoc



Coyoacan



Benito Juarez



Miguel Hidalgo

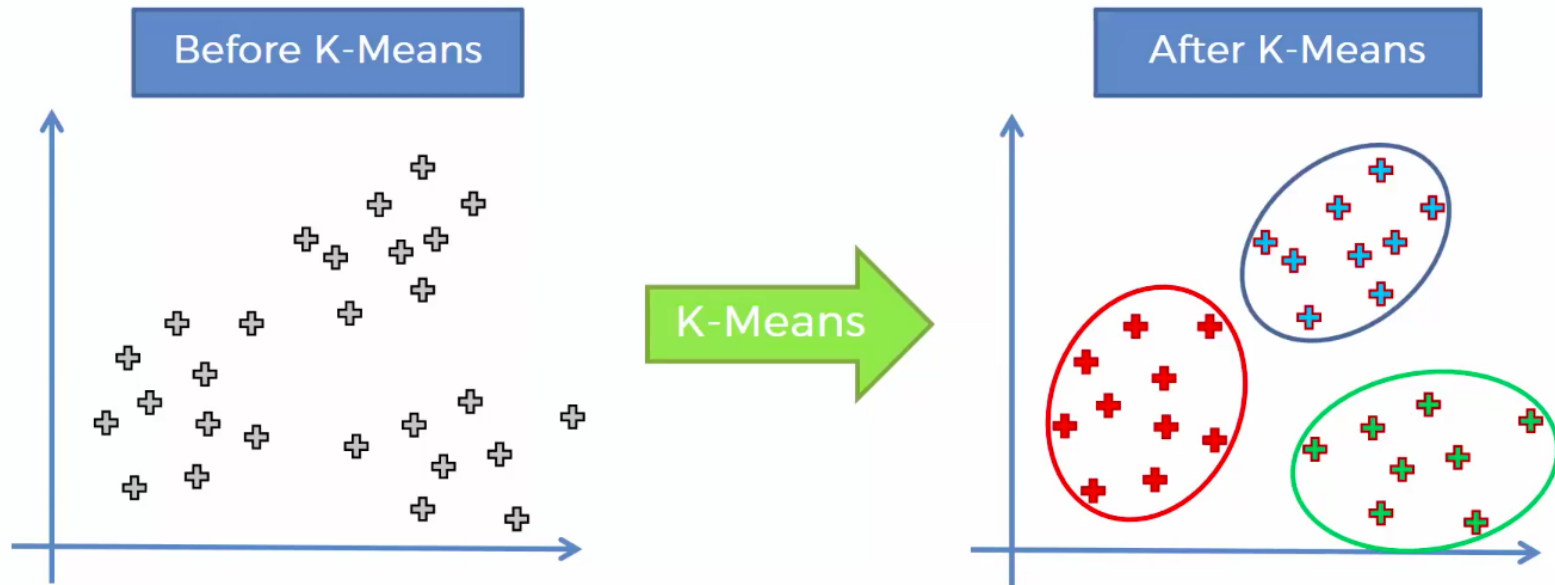
Objective

- Find neighbourhoods similar to another one that serves as a point of comparison.
- In this case, the similarity is based on the venues in the neighbourhoods, according to the information provided by the Foursquare API.

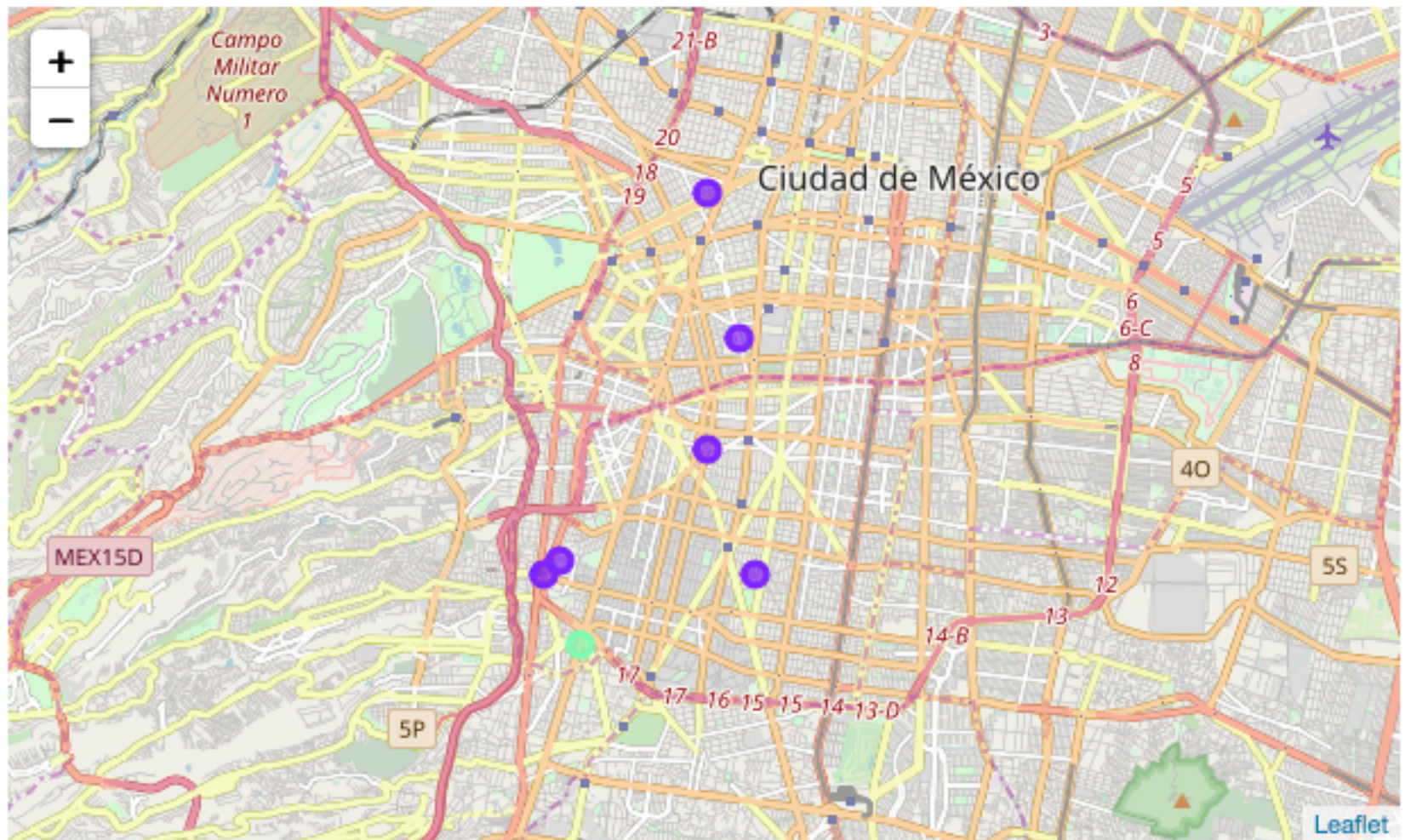
Steps followed

- Use Foursquare API to collect venues from current neighbourhood
 - Result: 100 rows for 1 neighbourhood
- Use Foursquare API to collect venues from 4 districts of Mexico City
 - Result: 11231 rows for 257 neighbourhoods
- Join both results and transform “venue category” using onehot-encoding
 - Result: 272 unique categories
- Group “venue categories” for each neighbourhood using the mean
- Use KMEANS to create clusters of similar neighbourhoods
- Find the closest neighbourhoods to the current neighbourhood using distance to centroid from KMEANS

KMEANS Algorithm



Similar neighbourhoods



Conclusions

- It is possible to help people who are in a situation similar to the one described in this case, using public data available through the Foursquare API.
- The final decision cannot be based solely on the results of this analysis.
 - Rather it should be considered as a tool to narrow the options that must be investigated in greater detail.
- One way to enrich the results of the analysis would be by adding demographic and socioeconomic attributes to each of the neighbourhoods.