

The best location for a new bakery in Madrid

The sweet decision

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IBM Data Science Professional Certificate

Final assignment - Capstone Project

How to decide the best location for a bakery

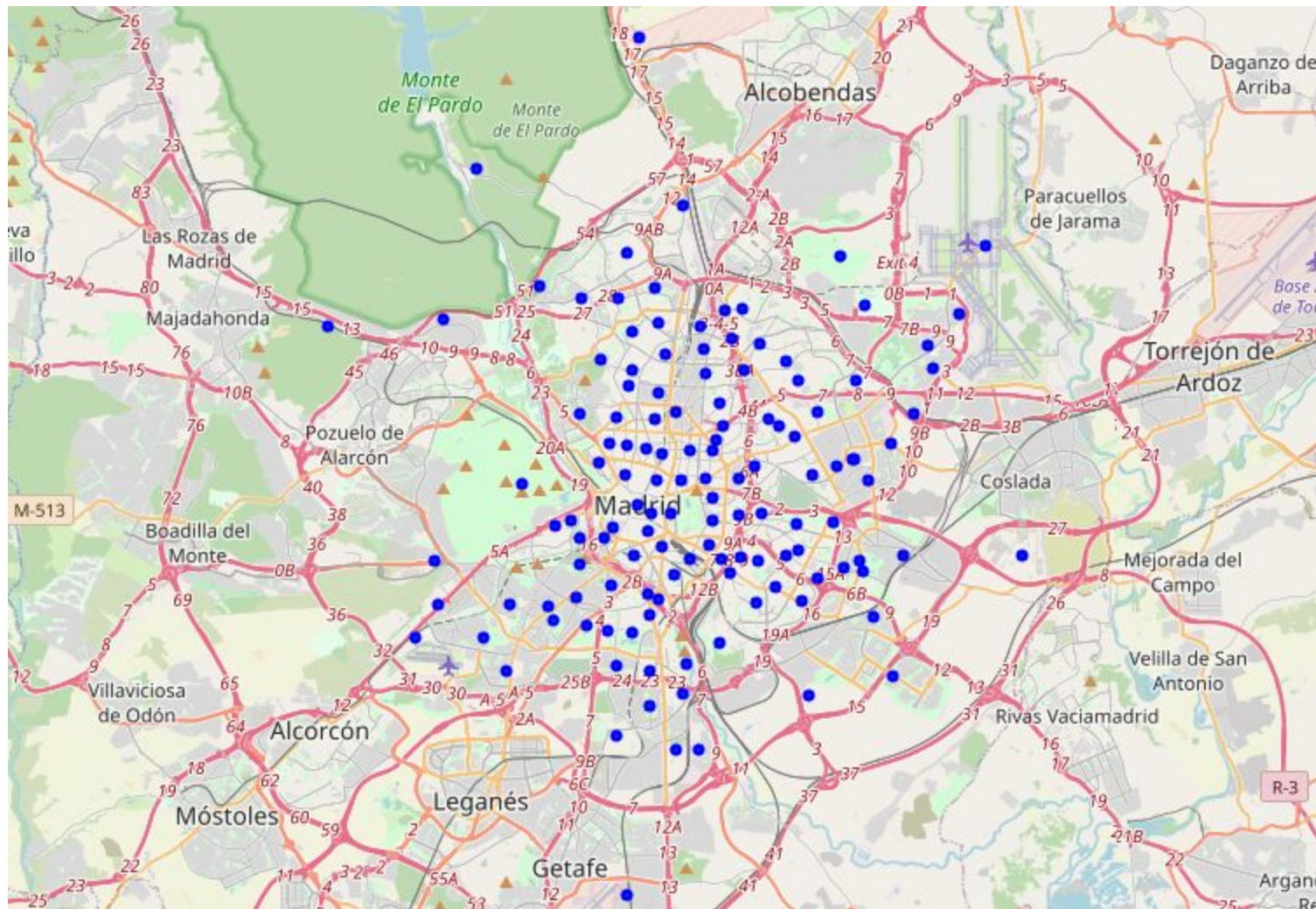
- Problem to solve: the best location for a new bakery in the north of Madrid.
- Why?
 - The stakeholder wants to run a new business about food stores.
 - The stakeholder knows the area (north of Madrid) and he thinks there are no bakeries enough.
 - Spanish people appreciate bakery products.



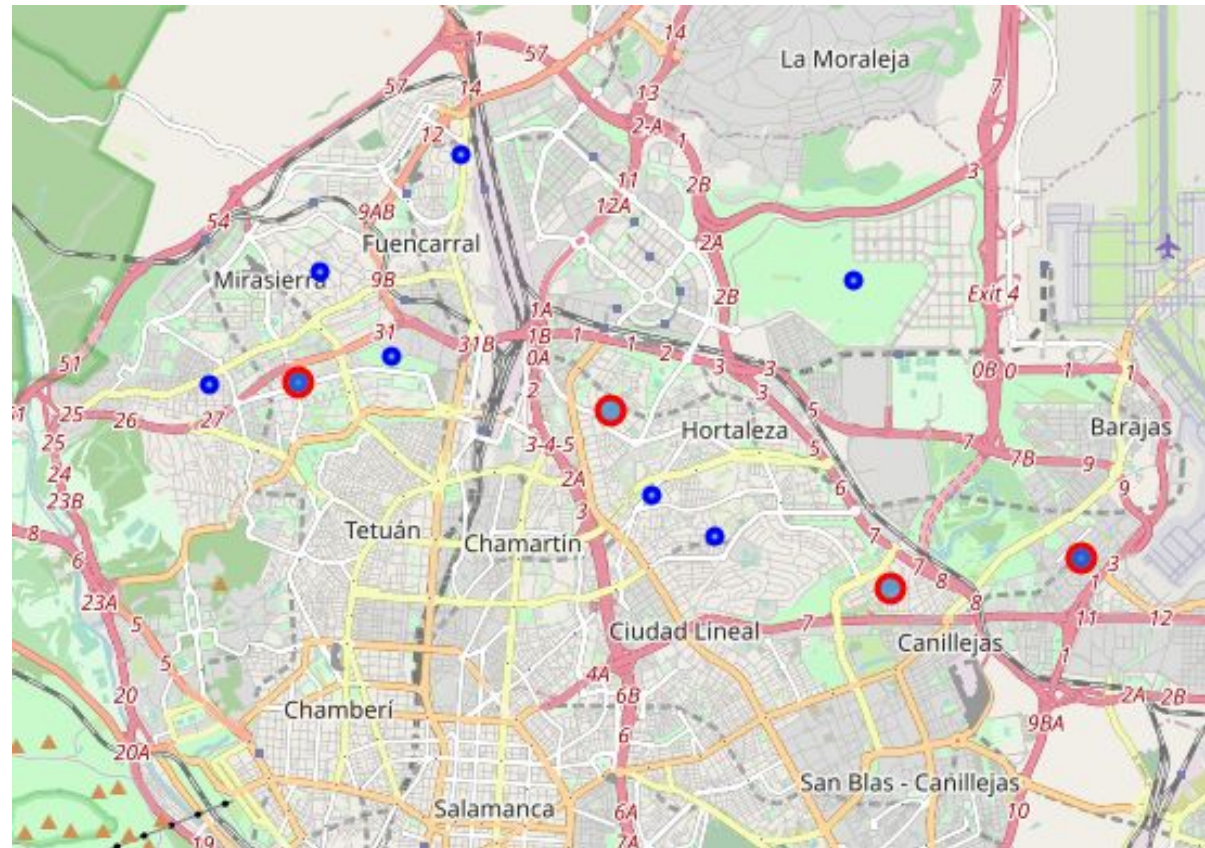
Data acquisition and cleaning

- Madrid neighborhoods
 - Name and latitude and longitude coordinates were scraped from wikipedia.
 - Population of every neighborhood was found on the web of Madrid City Hall.
- Venues of every neighborhood
 - Foursquare API was used.
- The main dataframe contents: name, latitude, longitude, area and population of every neighborhood in the north of Madrid.
- The cluster dataframe contents the most common seven venues of every neighborhood.

Neighborhoods of Madrid



Neighborhoods in the north of Madrid



Clustering

	Neighborhood	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	Cluster
0	Aeropuerto	Airport Lounge	Spanish Restaurant	Duty-free Shop	Café	Cafeteria	Sandwich Place	Fast Food Restaurant	0
1	Alameda de Osuna	Shop & Service	Smoke Shop	Metro Station	Italian Restaurant	Chinese Restaurant	Hotel	Pizza Place	0
2	Apóstol Santiago	Grocery Store	Metro Station	Bakery	Flea Market	Department Store	Diner	Donut Shop	0
3	Canillas	Hotel	Metro Station	Plaza	Restaurant	Rock Club	Spanish Restaurant	Soccer Field	0
4	Casco Histórico de Barajas	Hotel	Pizza Place	Spanish Restaurant	Plaza	Restaurant	Sandwich Place	Boarding House	0
5	Corralejos	Spanish Restaurant	Hostel	Mexican Restaurant	Coffee Shop	Restaurant	Park	Supermarket	0
6	El Pardo	Spanish Restaurant	Flea Market	Cosmetics Shop	Department Store	Diner	Donut Shop	Duty-free Shop	2
7	El Pilar	Fast Food Restaurant	Tapas Restaurant	Burger Joint	Video Game Store	Pizza Place	Frozen Yogurt Shop	General Entertainment	0
8	Fuentealarreina	Soccer Field	Fast Food Restaurant	Video Game Store	Cosmetics Shop	Department Store	Diner	Donut Shop	1
9	La Paz	Park	Food & Drink Shop	Athletics & Sports	Spanish Restaurant	Italian Restaurant	Fast Food Restaurant	Cosmetics Shop	0
10	Mirasierra	Breakfast Spot	Supermarket	Café	Mediterranean Restaurant	Video Game Store	Department Store	Diner	0
11	Palomas	Coffee Shop	Restaurant	Café	Asian Restaurant	Spanish Restaurant	Sandwich Place	Food Truck	0



Conclusion

- There are only four bakeries in the area of the analysis.
- It seems a good opportunity to run one or more bakeries.
- Some of the neighborhoods with more people do not have a bakery currently.
- Other food stores like supermarkets or groceries would be an interesting option.