

Finding a location to a gourmet restaurant in Buenos Aires, Argentina

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CAPSTONE PROJECT - THE BATTLE OF THE NEIGHBORHOODS

APPLIED DATA SCIENCE CAPSTONE BY IBM/COURSERA



Problem description

- ❖ The Ciudad Autónoma de Buenos Aires (CABA) is one of the twenty-four federal entities and the capital city of Argentina. Buenos Aires is a cosmopolitan city and a major tourist destination.
- ❖ I am going to try to find an optimal location for a company that wants to open a gourmet restaurant in this city. The decision will be taken based on the places where we can find more restaurants, galleries, because those neighborhoods are supposed to be haunted.
- ❖ In order to do that, first we are going to collect the data of the Buenos Aires neighborhoods and their respective coordinates. Then we will work with our database to finally apply K means clustering and thus determine in which neighborhoods the investment would be convenient.

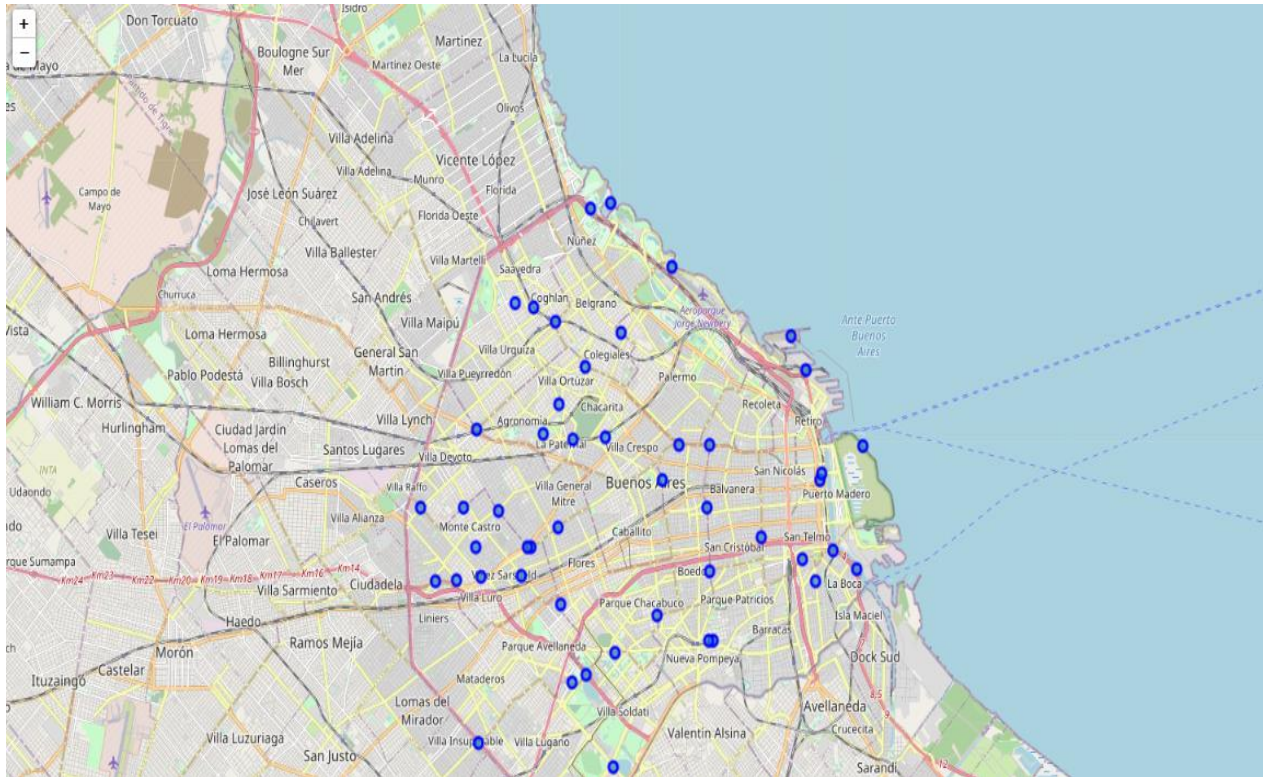
Data acquisition and cleaning

To consider the problem we can list the datas as below:

- ❖ I found the data from “Datos Abiertos de Buenos Aires” that contains a list of the different neighborhoods from CABA and their coordinates. I cleaned the data and convert it to a dataframe.
- ❖ I used Forsquare API to get the most common venues of given the neighborhoods from Buenos Aires.

	comuna	Neighborhood	Latitude	Longitude
0	15	CHACARITA	-34.595989	-58.452820
1	15	PATERNAL	-34.596558	-58.465577
2	15	VILLA CRESPO	-34.597827	-58.423753
3	11	VILLA DEL PARQUE	-34.614865	-58.494610
4	5	ALMAGRO	-34.614116	-58.412870

Buenos Aires map



Foursquera API exploration

I designed the limit as 100 venue and the radius 500 meter for each neighborhood from their given latitude and longitude information ,t hen I created a table which shows list of top 10 venue category for each borough in below table

	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	8th Most Common Venue	9th Most Common Venue
0	AGRONOMIA	Hardware Store	Argentinian Restaurant	Train Station	Big Box Store	Bus Stop	Jewish Restaurant	Fast Food Restaurant	Furniture / Home Store	Food Truck
1	ALMAGRO	Argentinian Restaurant	Pizza Place	Indie Theater	Coffee Shop	Camera Store	Grocery Store	Restaurant	Pharmacy	Sushi Restaurant
2	BALVANERA	Theater	Gym / Fitness Center	Hotel	Café	Italian Restaurant	Argentinian Restaurant	Gym	Pizza Place	Bakery
3	BARRACAS	Supermarket	Gym	Restaurant	Café	Argentinian Restaurant	Pet Store	Plaza	Fish Market	Deli / Bodega
4	BELGRANO	Harbor / Marina	Argentinian Restaurant	Paintball Field	Sports Club	Gun Range	Women's Store	Fast Food Restaurant	Food Truck	Food Court

Results

The findings suggest that neighborhoods in cluster number one, will be possible places to open the restaurant.

	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	8th Most Common Venue
1	PATERNAL	Art Gallery	BBQ Joint	Diner	Arts & Entertainment	Fish Market	Gastropub	Gas Station	Furniture / Home Store
2	VILLA CRESPO	Pizza Place	Middle Eastern Restaurant	Bar	BBQ Joint	Indie Theater	Café	Cajun / Creole Restaurant	Restaurar
3	VILLA DEL PARQUE	Breakfast Spot	BBQ Joint	Plaza	Argentinian Restaurant	Burger Joint	Restaurant	Café	Fish Market
4	ALMAGRO	Argentinian Restaurant	Pizza Place	Indie Theater	Coffee Shop	Camera Store	Grocery Store	Restaurant	Pharmacy
5	CABALLITO	Café	Argentinian Restaurant	Bar	Indie Theater	Bakery	Hotel	Park	Restaurar
6	VILLA SANTA RITA	Restaurant	Middle Eastern Restaurant	Ice Cream Shop	Korean Restaurant	Deli / Bodega	Café	Furniture / Home Store	Comfort Food Restaurar
8	VILLA REAL	Pharmacy	Bus Stop	Café	Pizza Place	Argentinian Restaurant	Fast Food Restaurant	Breakfast Spot	Bakery
10	FLORESTA	Ice Cream Shop	Korean Restaurant	Deli / Bodega	Restaurant	Furniture / Home Store	Middle Eastern Restaurant	Comfort Food Restaurant	Toy / Game Store