

# Deciding where to open vegetables store in Paris

Coursera Capstone





# Introduction

Capstone project I will help an investor who is about to start a business

Selling BIO: vegetables and fruits in Paris city.

In the past few years my client has tried to start his dream business but he failed many times.

So this time he consulted me for help and as a data scientist



# Approach

We will search a list of all paris neighborhoods.

Second: we will sort all neighborhoods by the number of restaurants and fast foods

Third: inverse sort neighbourhoods by the number of store and supermarkets

The last step is to reverse order our data by the population count



# Data acquisition and cleaning

Paris has in total 20 neighborhoods (called arrondissements in French).

Explore, analyze and segment neighborhoods, longitude and latitude of each neighborhood.

Links to the dataset are:

<https://www.data.gouv.fr/fr/datasets/r/e88c6fda-1d09-42a0-a069-606d3259114e>

Find the most populous boroughs in Paris (more populous Borough = Higher gain). [The dataset that exists in the same link above]



# Data

	code_comm	nom_dept	statut	nom_region	code_reg	code_dept	geo_point_2d	postal_code	nom_comm	population
0	645	ESSONNE	Commune simple	ILE-DE-FRANCE	11	91	[48.750443119964764, 2.251712972144151]	91370	VERRIERES-LE-BUISSON	15.5
1	133	SEINE-ET-MARNE	Commune simple	ILE-DE-FRANCE	11	77	[48.41256065214989, 3.052940505560729]	77126	COURCELLES-EN-BASSEE	0.2
2	378	ESSONNE	Commune simple	ILE-DE-FRANCE	11	91	[48.52726809075556, 2.19718165044305]	91730	MAUCHAMPS	0.3
3	243	SEINE-ET-MARNE	Chef-lieu canton	ILE-DE-FRANCE	11	77	[48.87307018579678, 2.7097808131278462]	77400	LAGNY-SUR-MARNE	20.2
4	414	SEINE-ET-MARNE	Commune simple	ILE-DE-FRANCE	11	77	[48.62891464105825, 3.2582355268439223]	77160	SAINT-HILLIERS	0.4



# Results

	Latitude	Longitude	City	Neighborhood	postal_code	population	count_restaurants	Neighborhood in Paris
0	48.876896	2.337460	PARIS	PARIS-9E-ARRONDISSEMENT	75009	60.3	100	
1	48.867903	2.344107	PARIS	PARIS-2E-ARRONDISSEMENT	75002	22.4	100	
2	48.859415	2.378741	PARIS	PARIS-11E-ARRONDISSEMENT	75011	152.7	45	
3	48.872527	2.312583	PARIS	PARIS-8E-ARRONDISSEMENT	75008	40.3	41	
4	48.828718	2.362468	PARIS	PARIS-13E-ARRONDISSEMENT	75013	182.0	62	
5	48.835156	2.419807	PARIS	PARIS-12E-ARRONDISSEMENT	75012	142.9	5	
6	48.863054	2.359361	PARIS	PARIS-3E-ARRONDISSEMENT	75003	35.7	86	
7	48.848968	2.332671	PARIS	PARIS-6E-ARRONDISSEMENT	75006	43.1	33	
8	48.854228	2.357362	PARIS	PARIS-4E-ARRONDISSEMENT	75004	28.2	100	
9	48.876029	2.361113	PARIS	PARIS-10E-ARRONDISSEMENT	75010	95.9	100	



# Results

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	Latitude	Longitude	City	Neighborhood	postal_code	population	count_restaurants	count_stores
17	48.840155	2.293559	PARIS	PARIS-15E-ARRONDISSEMENT	75015	236.5	61	3
15	48.892735	2.348712	PARIS	PARIS-18E-ARRONDISSEMENT	75018	200.6	51	2
13	48.863187	2.400820	PARIS	PARIS-20E-ARRONDISSEMENT	75020	197.1	48	4
12	48.886869	2.384694	PARIS	PARIS-19E-ARRONDISSEMENT	75019	184.8	31	2
4	48.828718	2.362468	PARIS	PARIS-13E-ARRONDISSEMENT	75013	182.0	62	1
10	48.860399	2.262100	PARIS	PARIS-16E-ARRONDISSEMENT	75016	169.4	2	0
16	48.887337	2.307486	PARIS	PARIS-17E-ARRONDISSEMENT	75017	168.5	64	1
2	48.859415	2.378741	PARIS	PARIS-11E-ARRONDISSEMENT	75011	152.7	45	6
5	48.835156	2.419807	PARIS	PARIS-12E-ARRONDISSEMENT	75012	142.9	5	0
19	48.828993	2.327101	PARIS	PARIS-14E-ARRONDISSEMENT	75014	137.2	24	1
9	48.876029	2.361113	PARIS	PARIS-10E-ARRONDISSEMENT	75010	95.9	100	3



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# Conclusion

Based on population and restaurants we can see that the best places to open the new business are:

- PARIS-15E-ARRONDISSEMENT
- PARIS-18E-ARRONDISSEMENT
- PARIS-20E-ARRONDISSEMENT

Also choose neighborhood where the number of stores is 0 or 1 so there will be less or no competition Like:

- PARIS-16E-ARRONDISSEMENT
- PARIS-12E-ARRONDISSEMENT
- PARIS-13E-ARRONDISSEMENT