

The battle of Neighborhoods

Opening a book store in the 20th arrondissement of Paris

I. Business Problem



Paris is the capital and most populous city of France, with an area of 105 square kilometres (41 square miles) and an official estimated population of 2,140,526 residents as of 1 January 2019. Since the 17th century, Paris has been one of Europe's major centers of finance, diplomacy, commerce, fashion, science, and the arts. The City of Paris is the center and seat of government of the Île-de-France, or Paris Region, which has an estimated official 2019 population of 12,213,364, or about 18 percent of the population of France.

The 20th (or XXe or vingtième) arrondissement of Paris is the last of the consecutively numbered arrondissements of the capital city of France. Also known as Ménilmontant, it is located on the right bank of the River Seine and contains the city's cosmopolitan districts Ménilmontant and Belleville. The 20th arrondissement is also internationally known for the Père Lachaise Cemetery where one can find the tombs of many famous artists.

Our client is an entrepreneur who loves books and who wants to open a book store in the 20th arrondissement of Paris. He would like to know exactly where he can open the book store. He wants a place where the demand is high and where no many book stores are already operating. To do so, he asked us to study the 20th arrondissement and more precisely:

1. Define areas with low number of book stores already opened
2. Among them, define attractive area to open the store. He would like to have schools/university close to his place because he loves to share his knowledge and recommendations.
3. Provide any insight on these locations (workplace, schools...) that might attract customers

II. Data

To solve the business problem, we would require the following data:

1. Details about the 20th arrondissement such as population (Wikipedia)
2. List of book shops in the 20th arrondissement, per zone (Foursquare)
4. List of schools/colleges/universities in the area with their addresses (Foursquare)
3. List of the transportation accessibility to ease customer venue (Foursquare)
5. Details of the surroundings (venues) of the top places to open the store (Foursquare)

III. Methodology

The data will be used as follows:

1. Use Foursquare and geopy data to map all the book stores in the 20th arrondissement
2. Use Foursquare and geopy data to map all the schools/college/university
4. Create a map that depicts the spread of the above
3. Study the map and define top locations for the book shop location

The processing of these DATA will allow to answer the key questions to make a decision:

1. What is the best location that meets criteria established
2. What is the distances from interesting venues

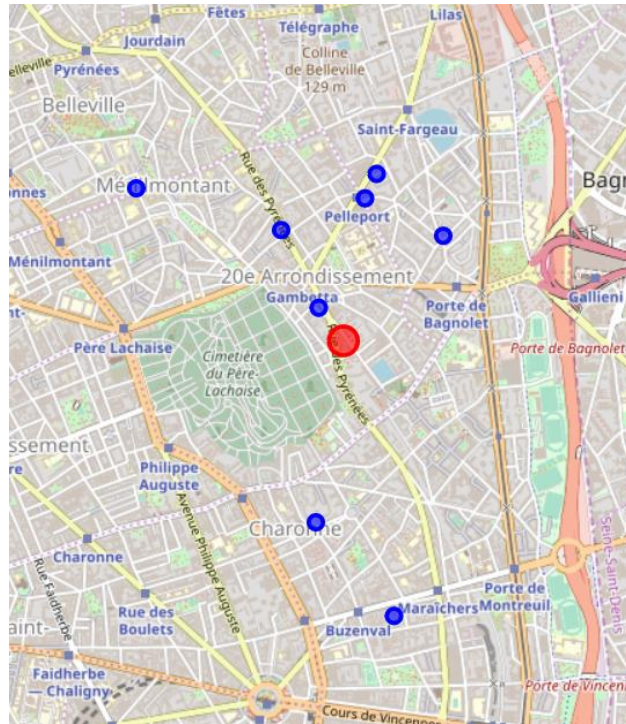
IV. Results

First, it was required to determine how many book stores were present in the 20th arrondissement. We've used Foursquare to determine this:

	Name	location	lat	long	Arrondissement
0	Librairie Papeterie Presse	2 rue du Surmelin	48.868049	2.401795	75020
1	Librairie des Gâtines	NaN	48.863748	2.399051	NaN
2	La Toute Petite Librairie	2 rue Étienne Marey	48.866557	2.406411	75020
3	Librairie Mona Lisait	259 rue des Pyrénées	48.866780	2.396845	75020
4	Librairie Nation	36 Boulevard de Charonne	48.855362	2.398855	75020
5	Librairie Le Monte-en-l'air	2 rue de la Mare	48.868418	2.388233	75020
6	Librairie Biret	152 avenue des Champs-Élysées	48.851651	2.403476	75008
7	A Tout Lire	141 avenue Gambetta	48.868986	2.402495	75020

We've noticed thanks to this analysis that there were not so many book stores opened in the area. This showed us that it might be a good business plan to focus on the 20th arrondissement to open a book store.

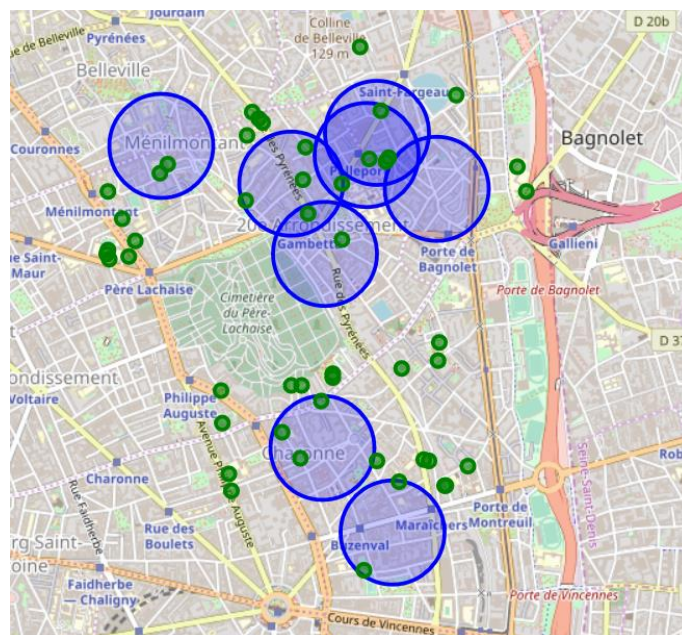
Then, we plotted these book stores on a map to see where they were located in the area:



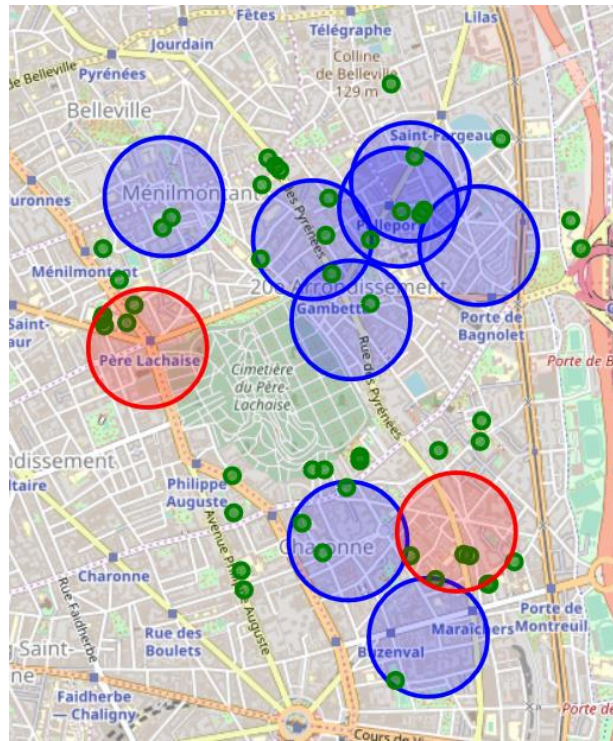
It is interesting to note that most of the book stores (in blue) are located very close one to another.

As requested by our entrepreneur, he wants the book store to be located close to many schools/high schools/universities because he knows that it will attract many customers.

Therefore, thanks to Foursquare, we extracted all the schools/high schools/universities in the 20th arrondissement and we plotted them on the map (plotted in green):



Thanks to the above map, we came with 2 areas not covered by any book stores and where there are many schools. Therefore, we will focus on these 2 areas to see whether they could be interesting to open a book store. The 2 areas are depicted in red:



We then looked at both of the defined area to see which one would be the best to open a new store. To do so, we extracted all the venues in a circle of 200m for each of the area. The first area in top left in the above map has the following venues:

	name	categories	address	distance
0	Haut les Coeurs	Bar	72 boulevard de Ménilmontant	169
1	Le Lieu du Vin	Wine Shop	3 avenue Gambetta	143
2	Ibis Paris Père Lachaise	Hotel	80 rue de la Folie Regnault	150
3	Bar & Beer	Beer Bar	48 boulevard menilmontant	67
4	Les Polissons	Bistro	1 avenue Gambetta	128
5	Les Tables du Père Lachaise	Bar	44 boulevard de Ménilmontant	54
6	Cafe La Factorie	Café	NaN	60
7	Zagros	Greek Restaurant	58 boulevard de Ménilmontant	97
8	Au Rond-Point	French Restaurant	65 Boulevard de Ménilmontant	15
9	Boulangerie Ounissi	Bakery	73 rue de la Folie Regnault	147
10	El Juanchito	Colombian Restaurant	69 rue de la Folie Regnault	169
11	La Base Filante	Bar	49 boulevard de Ménilmontant	156
12	La Factorie - Saint Amour	French Restaurant	32 boulevard de Ménilmontant	59

In this area, there are many bar and restaurants. We can conclude that this is a place with lots of traffic and where people enjoy coming. This can be definitely a good location to open a book store.

Next, we look at the second area in the bottom right of the map on the previous page. Here below are presented the venue in this area:

	name	categories	address	distance
0	Sohna Punjab	Indian Restaurant	76 rue des Pyrénées	188
1	Vélib' [20-16]	Bike Rental / Bike Share	114 bis rue des Pyrénées	170
2	Coccinelle	Grocery Store	108, rue des pyrénées	86
3	Salve Régina	Italian Restaurant	96 Rue des Pyrénées	33
4	Le Marché D'à Côté	Grocery Store	92 rue des Pyrénées	79

The area seems to be poor in venues. There are only 2 restaurants and 2 grocery stores. It does not seem to be a good place to open a book store

V. Discussions

Thanks to the analysis, we came up with 2 areas that satisfy the requirements of our client. However, if we would to chose between the 2, we will definitely go with the area close to Père Lachaise because there are many venues that will attract more customers.

Now that we have defined analytically the best place to set up, we would need to go on the field to confirm that this is indeed a good choice by looking at the area, discussing with people to see if they would be interesting with a book store...

VI. Conclusion

The best area to open the book store in the 20th arrondissement seems to be close to Père Lachaise at the following location: Latitude = 48.862667 Longitude = 2.387254 There are many schools surrounding the place and there are many venues showing that the place is a living place where people like to come.

Therefore, we recommend the entrepreneur to open his book store in this area.