

SUITABLE NEW STORE LOCATIONS IN PARIS FOR A FASHION RETAILER

PROBLEM SOLVING BY DATA ANALYSIS TOOL

I. INTRODUCTION AND DISCUSSION OF THE BUSINESS OBJECTIVE AND PROBLEM

- **Criteria**
- The analysis and recommendations for new store locations will focus on general districts with these establishments, not on specific store addresses.
- **Why Data?**
- Data will provide better answers and better solutions to their task at hand.
- **Outcomes**
- The goal is to identify the best districts - Arrondissements - to open new stores as part of the company's plan.

2.THE DATA SCIENCE WORKFLOW DATA REQUIREMENTS

- *Outline the initial data that is required*
- *Obtain the Data:*
- *Initial Data Wrangling and Cleaning:*
- *Data Analysis and Location Data:*
- *Visualization:*
- *Discussion and Conclusions:*

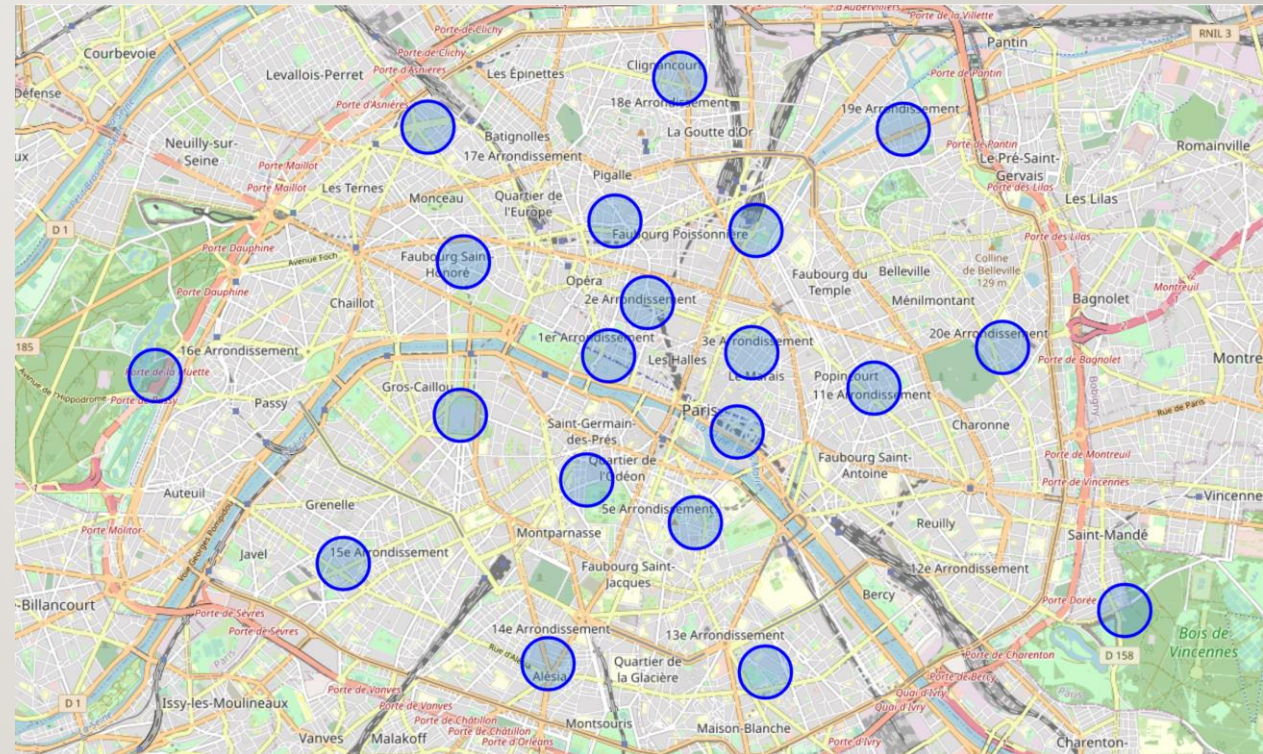
3. DATA RESEARCH AND PREPARATION

- Import the Paris District Data
 - Data for the arrondissements is necessary to select the most suitable of these areas for new stores.
- Exploring, Wrangling and Cleaning the Data
 - Rename the columns 'Geometry_X' and 'Geometry_Y', 'CAR' to 'Arrondissement' etc...
- Clean up the dataset to remove unnecessary columns
 - The cleaned data is shown in the next page...

	Arrondissement_Num	Neighborhood	French_Name	Latitude	Longitude
0	3	Temple	3eme Ardt	48.862872	2.360001
1	19	Buttes-Chaumont	19eme Ardt	48.887076	2.384821
2	14	Observatoire	14eme Ardt	48.829245	2.326542
3	10	Entrepot	10eme Ardt	48.876130	2.360728
4	12	Reuilly	12eme Ardt	48.834974	2.421325
5	16	Passy	16eme Ardt	48.860392	2.261971
6	11	Popincourt	11eme Ardt	48.859059	2.380058
7	2	Bourse	2eme Ardt	48.868279	2.342803
8	4	Hotel-de-Ville	4eme Ardt	48.854341	2.357630
9	17	Batignolles-Monceau	17eme Ardt	48.887327	2.306777
10	18	Buttes-Montmartre	18eme Ardt	48.892569	2.348161
11	1	Louvre	1er Ardt	48.862563	2.336443
12	5	Pantheon	5eme Ardt	48.844443	2.350715
13	7	Palais-Bourbon	7eme Ardt	48.856174	2.312188
14	20	Menilmontant	20eme Ardt	48.863461	2.401188
15	8	elysee	8eme Ardt	48.872721	2.312554
16	9	Opera	9eme Ardt	48.877164	2.337458
17	13	Gobelins	13eme Ardt	48.828388	2.362272
18	15	Vaugirard	15eme Ardt	48.840085	2.292826
19	6	Luxembourg	6eme Ardt	48.849130	2.332898

4. DISCUSSION OF THE BUSINESS OBJECTIVE AND DATA WORKFLOW (TO BE CONTINUED..)

- We will leverage Foursquare location data to obtain data on high traffic areas - in all of the 20 districts.
- Create a map of Paris with districts superimposed (shown as right)



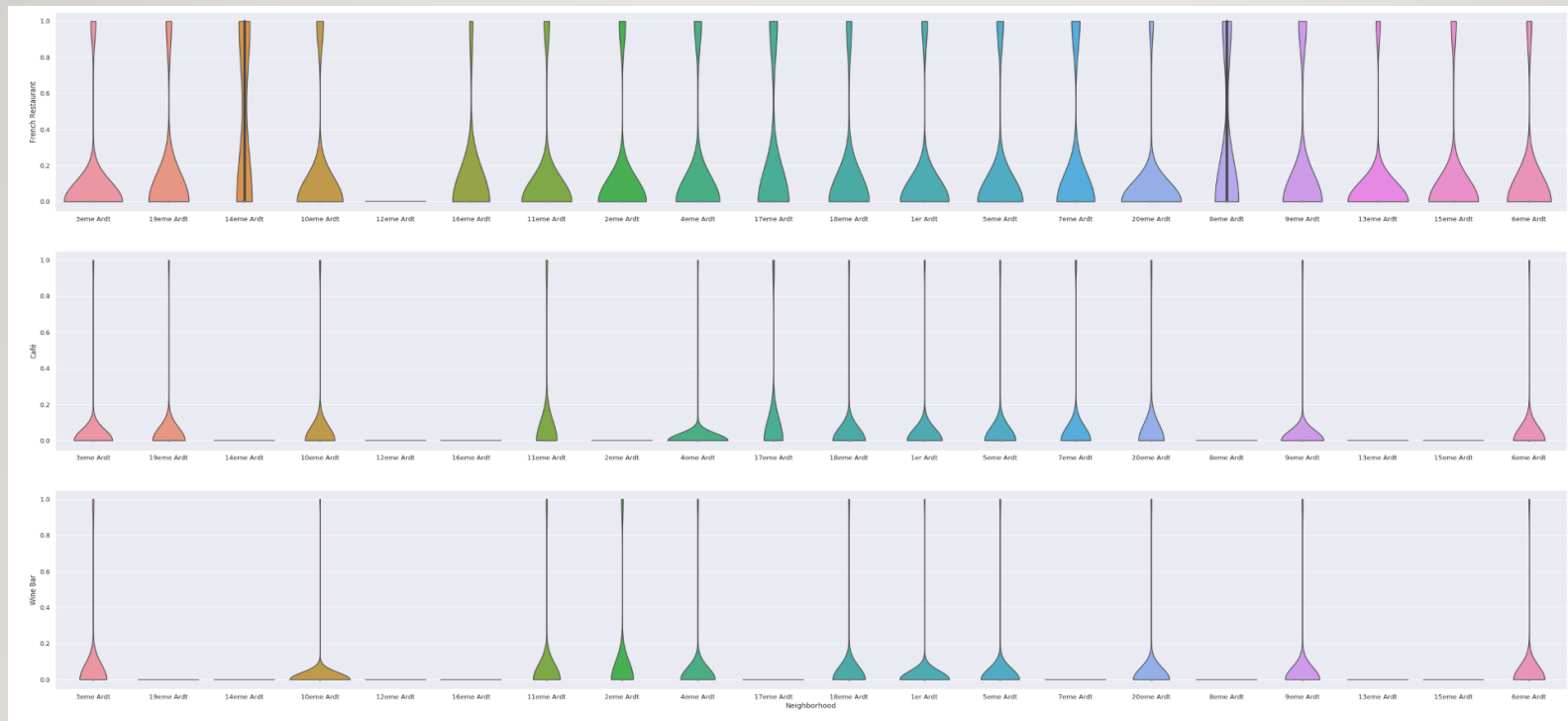
4. DISCUSSION OF THE BUSINESS OBJECTIVE AND DATA WORKFLOW (TO BE CONTINUED..)

- Create a top 10 venue categories for each neighborhood

	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	10th Most Common Venue
0	10eme Ardt	French Restaurant	Hotel	Coffee Shop	Café	Indian Restaurant	Bistro	Pizza Place	Japanese Restaurant	Bar	Seafood Restaurant
1	11eme Ardt	French Restaurant	Café	Supermarket	Bar	Pastry Shop	Wine Bar	Restaurant	Bakery	Theater	Cocktail Bar
2	12eme Ardt	Zoo Exhibit	Supermarket	Monument / Landmark	Zoo	Antique Shop	Argentinian Restaurant	Food & Drink Shop	Flower Shop	Fish & Chips Shop	Fast Food Restaurant
3	13eme Ardt	Vietnamese Restaurant	Asian Restaurant	Thai Restaurant	Chinese Restaurant	French Restaurant	Juice Bar	Bus Stop	Coffee Shop	Cambodian Restaurant	Sandwich Place
4	14eme Ardt	French Restaurant	Hotel	Bistro	Plaza	Laundromat	Food & Drink Shop	Bus Stop	Brasserie	Tea Room	Bakery
5	15eme Ardt	Hotel	French Restaurant	Italian Restaurant	Coffee Shop	Lebanese Restaurant	Indian Restaurant	Brasserie	Bistro	Japanese Restaurant	Thai Restaurant
6	16eme Ardt	Plaza	Lake	Pool	Bus Station	French Restaurant	Bus Stop	Boat or Ferry	Park	Art Museum	Recording Studio
7	17eme Ardt	French Restaurant	Hotel	Italian Restaurant	Japanese Restaurant	Café	Bakery	Plaza	Bistro	Bar	Portuguese Restaurant
8	18eme Ardt	Bar	French Restaurant	Hotel	Convenience Store	Restaurant	Coffee Shop	Café	Sandwich Place	Cheese Shop	Plaza
9	19eme Ardt	French Restaurant	Bar	Bistro	Hotel	Seafood Restaurant	Beer Bar	Supermarket	Brewery	Restaurant	Steakhouse
10	1er Ardt	French Restaurant	Hotel	Japanese Restaurant	Plaza	Italian Restaurant	Art Museum	Theater	Garden	Cheese Shop	Candy Store
11	20eme Ardt	Bakery	Plaza	Japanese Restaurant	French Restaurant	Italian Restaurant	Café	Pizza Place	Bar	Bistro	Lounge
12	2eme Ardt	French Restaurant	Wine Bar	Cocktail Bar	Hotel	Bakery	Bistro	Creperie	Concert Hall	Thai Restaurant	Italian Restaurant
13	3eme Ardt	French Restaurant	Japanese Restaurant	Coffee Shop	Wine Bar	Gourmet Shop	Italian Restaurant	Art Gallery	Bakery	Burger Joint	Sandwich Place
14	4eme Ardt	French Restaurant	Clothing Store	Ice Cream Shop	Pedestrian Plaza	Plaza	Wine Bar	Hotel	Italian Restaurant	Coffee Shop	Tea Room
15	5eme Ardt	French Restaurant	Italian Restaurant	Science Museum	Bakery	Bar	Café	Plaza	Hotel	Coffee Shop	Pub
16	6eme Ardt	French Restaurant	Fountain	Bistro	Pastry Shop	Cocktail Bar	Plaza	Café	Clothing Store	Supermarket	Pub
17	7eme Ardt	Hotel	French Restaurant	Italian Restaurant	Café	Plaza	Cocktail Bar	History Museum	Historic Site	Garden	Bistro
18	8eme Ardt	French Restaurant	Hotel	Spa	Theater	Art Gallery	Plaza	Cocktail Bar	Park	Resort	Modern European Restaurant
19	9eme Ardt	French Restaurant	Hotel	Cocktail Bar	Bakery	Bistro	Lounge	Wine Bar	Japanese Restaurant	Café	Plaza

4. DISCUSSION OF THE BUSINESS OBJECTIVE AND DATA WORKFLOW (TO BE CONTINUED..)

- Let's look at their frequency of occurrence for all the Paris neighborhoods



5. INFERENCES AND DISCUSSION

- The final 3 neighborhoods for new store locations are where 4 criteria are met:
 - 3eme Ardt : Arrondissement 3, Temple
 - 4eme Ardt : Arrondissement 4, Hotel-de-Ville
 - 6eme Ardt : Arrondissement 6, Luxembourg
- Let's look at the 3 districts on a Paris map



6. CONCLUSIONS

- Domain knowledge of the industry and of the city itself.
- The data analysis and resulting recommendations have greatly narrowed down the best district options.
- Data has helped to provide a better strategy, which will lead to a better solution in the end.