# Best Location for to Open a New Wine Shop in Paris

## 1. Introduction / Business Problem

Locations for a New Wine shop in High Traffic Areas in Paris France
A successful Online wine shop wants to go into retailing to own a physical store where they can entertain customers and give them a taste of the wine before the customers can buy.

According to their market survey, they are planning to launch a new brand of wine and they figured out if people get to taste the wine first they will prefer it to wines from other competitors. But being an e-commerce guru with only online presence, there is no way they can get people to taste the new set of wines and also to entertain people.
As a data scientist, I have been given the task to analyze all locations in Paris and provide which is the best location for them to open this wine shop. I am to leverage on existing data to help them make a good data-driven decision on which location has the highest traffic in Paris.

I will be leveraging on Foursquare Location data to help me provide the required solution and help the company in making data-driven decisions about the best location to launch from.

*Criteria*

According to some qualitative data analysis online, they suggest that the best location to open a new wine shop might not be where other wine shops are, but locations where there are Restaurants, Cafes and Bars. A location where people go to socialize a lot and frequently, so opening a wine shop in that location might just be the best.

Narrowing down the data to the best district options derived from qualitative analysis allows for either further research to be conducted on people taste, or physical searching for specific location by the company.

## 2. The Data

The main data for this project will be gotten from Foursquare Location data and Municipax data exported
from https://opendata.paris.fr/explore/dataset/arrondissements/table/?dataChart
According to my research, the main districts in Paris are divided into 20 Arrondissements Municipaux (administrative districts), shortened to arrondissements.

The data regarding the districts in Paris needs has been researched and identified. Data wrangling and cleaning will have to be performed on these data.

Foursquare location data will be leveraged to explore or compare districts around Paris, identifying the high traffic areas where consumers go to Restaurants, Cafes, Bars, dining and entertainment - the areas where a new wine shop can be opened.

*The Data Science Workflow for this part includes the following:*

| | 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 |

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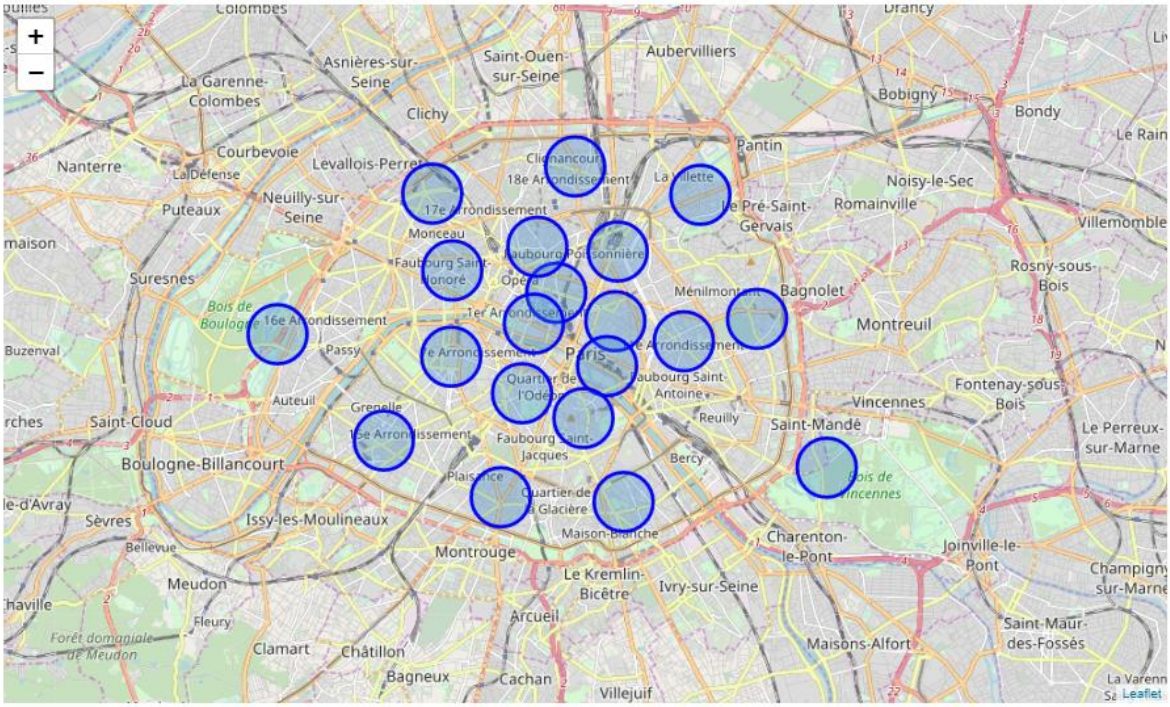


# 3. Methodology

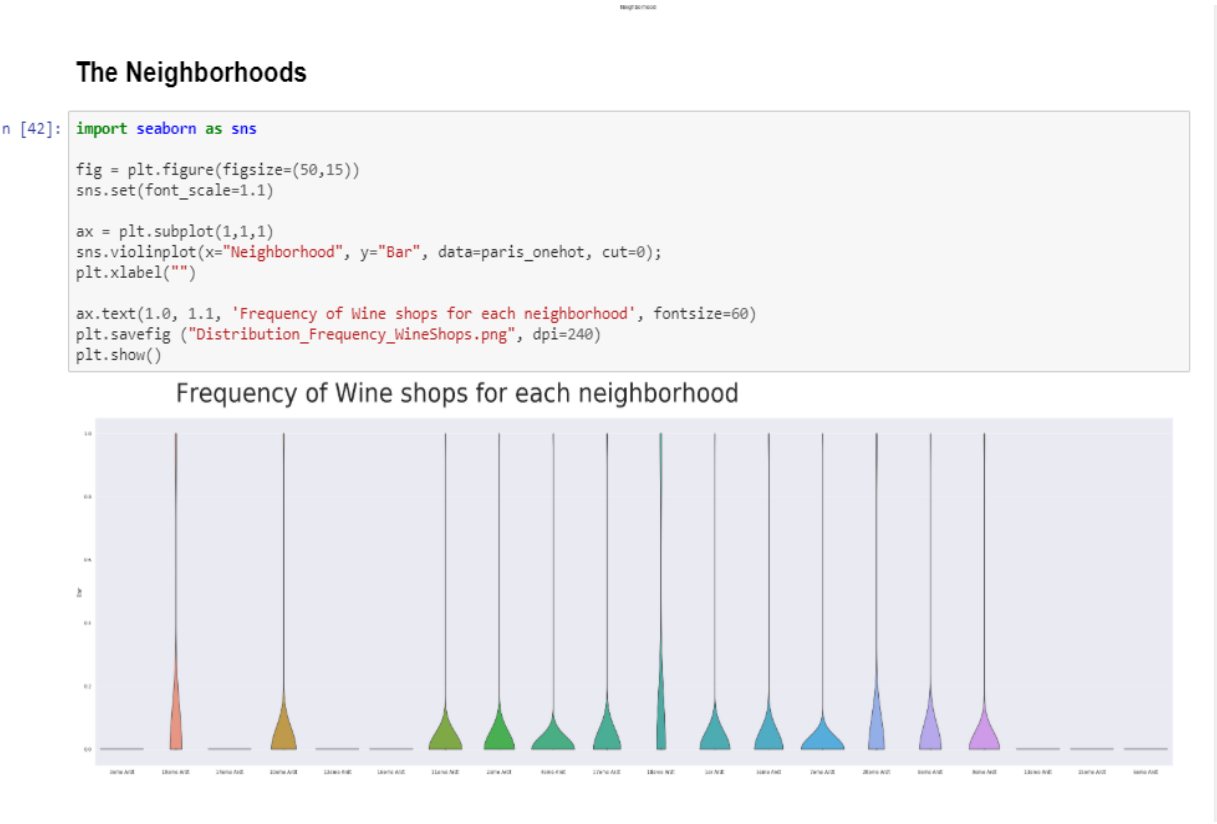
*Data Analysis and Location Data:*

- Foursquare location data will be leveraged to explore or compare districts around Paris.
- Data manipulation and analysis to derive subsets of the initial data.
- Identifying the high traffic areas using data visualization and statistical analysis.

| | 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 | Bistro | Café | Indian Restaurant | Bar | Italian Restaurant | Pizza Place | Japanese Restaurant |
| 1 | 11eme Ardt | French Restaurant | Café | Pastry Shop | Wine Bar | Restaurant | Japanese Restaurant | Asian Restaurant | Theater | Cocktail Bar | Pizza Place |
| 2 | 12eme Ardt | Zoo Exhibit | Monument / Landmark | Supermarket | Park | Zoo | Coworking Space | Electronics Store | Flower Shop | Fish & Chips Shop | Fast Food Restaurant |
| 3 | 13eme Ardt | Vietnamese Restaurant | Asian Restaurant | Thai Restaurant | Chinese Restaurant | French Restaurant | Juice Bar | Plaza | Creperie | Fast Food Restaurant | Butcher |
| 4 | 14eme Ardt | French Restaurant | Hotel | Pizza Place | Bistro | Plaza | Bakery | Fast Food Restaurant | Brasserie | Supermarket | Sushi Restaurant |
| 5 | 15eme Ardt | Italian Restaurant | Hotel | French Restaurant | Coffee Shop | Japanese Restaurant | Thai Restaurant | Lebanese Restaurant | Park | Indian Restaurant | Brasserie |
| 6 | 16eme Ardt | Plaza | Lake | French Restaurant | Pool | Art Museum | Boat or Ferry | Bus Station | Park | Electronics Store | Fish & Chips Shop |
| 7 | 17eme Ardt | French Restaurant | Hotel | Italian Restaurant | Bakery | Japanese Restaurant | Plaza | Bistro | Café | Portuguese Restaurant | Diner |
| 8 | 18eme Ardt | Bar | French Restaurant | Coffee Shop | Pizza Place | Café | Convenience Store | Restaurant | Hotel | Supermarket | Pool |
| 9 | 19eme Ardt | French Restaurant | Bar | Café | Bistro | Seafood Restaurant | Beer Bar | Hotel | Brewery | Supermarket | Steakhouse |
| 10 | 1er Ardt | French Restaurant | Japanese Restaurant | Café | Plaza | Hotel | Coffee Shop | Udon Restaurant | Bakery | Art Museum | Historic Site |
| 11 | 20eme Ardt | French Restaurant | Bakery | Park | Plaza | Bistro | Japanese Restaurant | Bar | Italian Restaurant | Food & Drink Shop | Wine Shop |
| 12 | 2eme Ardt | French Restaurant | Wine Bar | Italian Restaurant | Cocktail Bar | Bistro | Bakery | Hotel | Creperie | Salad Place | Gym |
| 13 | 3eme Ardt | French Restaurant | Coffee Shop | Bistro | Café | Burger Joint | Sandwich Place | Bakery | Moroccan Restaurant | Japanese Restaurant | Italian Restaurant |
| 14 | 4eme Ardt | French Restaurant | Ice Cream Shop | Pastry Shop | Hotel | Wine Bar | Tea Room | Italian Restaurant | Bakery | Cocktail Bar | Pedestrian Plaza |
| 15 | 5eme Ardt | French Restaurant | Italian Restaurant | Café | Plaza | Coffee Shop | Science Museum | Bakery | Hotel | Pub | Wine Bar |
| 16 | 6eme Ardt | French Restaurant | Italian Restaurant | Bakery | Bistro | Pastry Shop | Fountain | Cocktail Bar | Ice Cream Shop | Japanese Restaurant | Tea Room |
| 17 | 7eme Ardt | Hotel | French Restaurant | Café | Italian Restaurant | Plaza | Coffee Shop | Cocktail Bar | History Museum | Ice Cream Shop | Bistro |
| 18 | 8eme Ardt | French Restaurant | Hotel | Bakery | Spa | Art Gallery | Cocktail Bar | Bar | Theater | Plaza | Fast Food Restaurant |


# 4. Results

Showing the best neighborhoods



# Discussion

Analysis using the data, as well as domain knowledge of retail and marketing, allow the list to be focused to just 3 neighborhoods.

The reasoning being that if the 3 criteria have been met - identifying neighborhoods that are lively with Restaurants, Cafés and Bars - adding wine shop into the mix of stores in the area is a significant bonus.

**We have chosen 3 districts which is will be gotten from an excel file on my github account**

```
]: chosen_districts = pd.read_csv('https://raw.githubusercontent.com/olaniyisinet/Coursera_Capstone/master/Chosen.csv')
   chosen_districts
```

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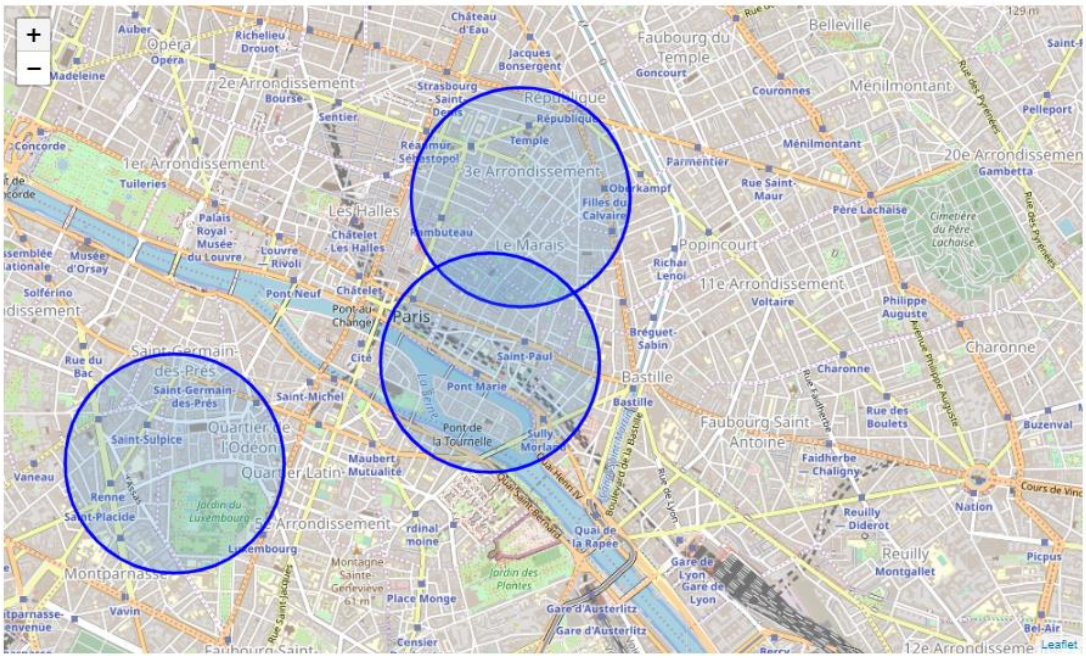
Out[45]:




# 6. Conclusion

Not a surprise that these districts are all very centrally located in center of Paris's arrondissements. Locations for wine shops and nice wine bars will be fitting the criteria for popular venues where people will like to go and have all the fun in one place, it would be the same in many cities of the world.

The goal was to identify the best location - Arrondissements - to open new wine shop as part of the company's plan to launch new brands of wine. The results will be sold to the management in a basic form that will help the data-driven analysis for the best locations to open the wine shop.

***Why Data?***

Without using data to make decisions about the best location for a new wine shop, the company could spend countless hours walking around, consulting clubs and party goers who will only give them advise based on their person preference, and they might end up opening in a location that is not ideal.

Data has provide better answers and better solutions to their task at hand.