

EXPLORING THE ARRONDISSEMENTS OF PARIS TO CREATE A TRAVEL ITINERARY

Coursera Applied Data Science Capstone Project

June 22, 2019

INTRODUCTION

- Paris, the global center of finance, fashion, arts, science, and gastronomy, and history, can be very intimidating and overwhelming on a first visit.
- It is advantageous to prepare a travel itinerary that prioritizes must-do activities and must-see sights in an efficient way but also have enough flexibility for exploration so visitors can rest assured they are not missing out on a special experience.
- This project aims to create an efficient itinerary that saves time, includes must-see attractions, and make suggestions for what to do, see, and eat, taking into account distance, time, and location utilizing Foursquare location data.

DATA ACQUISITION & CLEANING

- The following sources were used in this project
 - Wikipedia (for arrondissement information)
 - Google Reviews, Architectural Digest, Lonely Planet (for top Paris landmarks)
 - Carto (for Paris location data to map out boundaries of arrondissement)
 - Foursquare (for venue information data and location)
- The data was gathered using web-scraping, making calls to the Foursquare API, and downloading geojson files.
- Minor data cleansing was done including adding simplified arrondissement column names, getting rid of duplicates, and deleting unnecessary columns.

EXPLORATORY DATA ANALYSIS

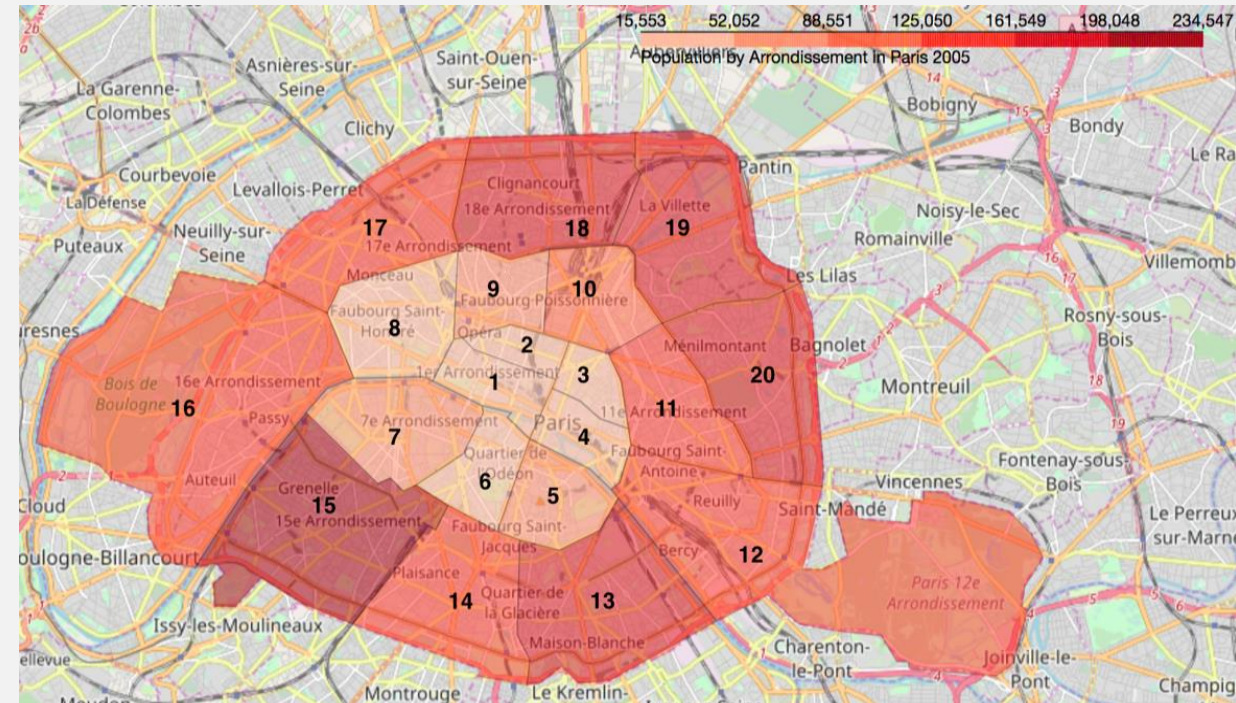
- The majority of our exploratory data analysis focused on using longitude and latitude information to make maps and other visuals in order to better understand where landmarks and other points of interests were located
- We utilized choropleth maps, dot maps, and content tables

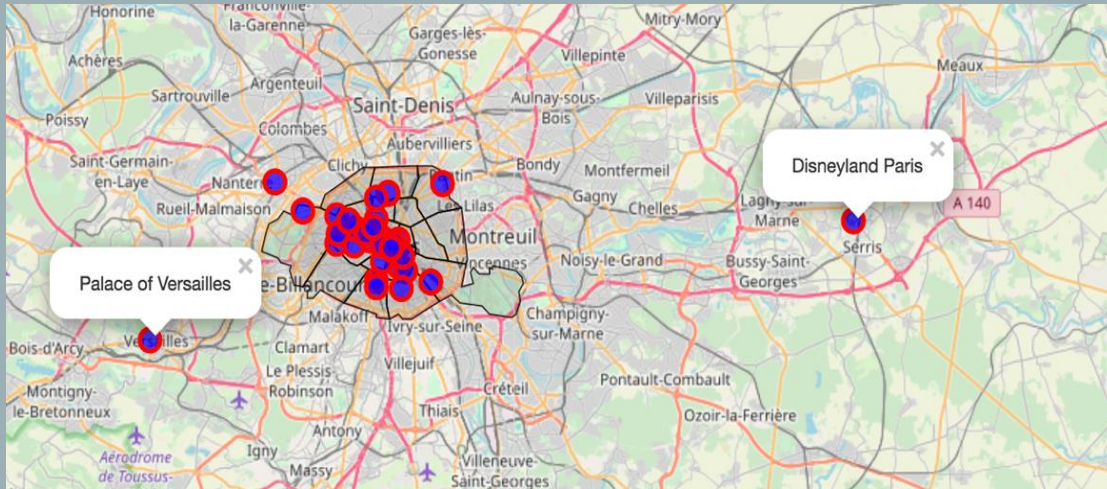
CHOROPLETH MAP OF PARIS

The first exploratory data analysis performed a choropleth and boundary map of Paris to get a visual of how and where the arrondissements are located.

Then, we used 2005 Population information to shade each arrondissement, where darker red means higher population density and lighter red means lower population density.

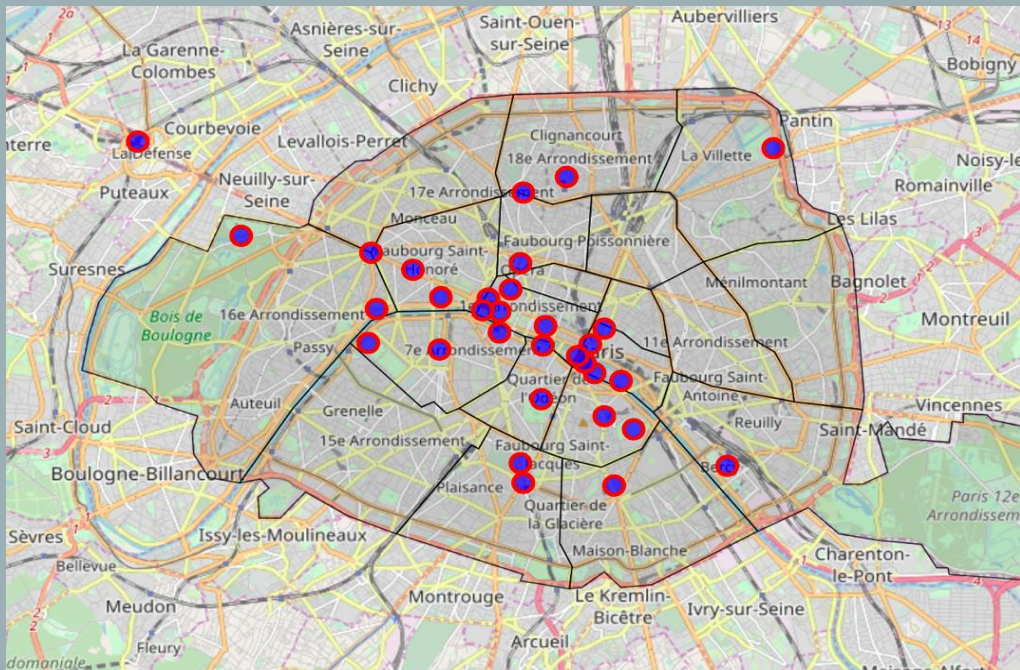
Notice the arrondissements are ordered in a clockwise fashion starting from the center and spiraling outward





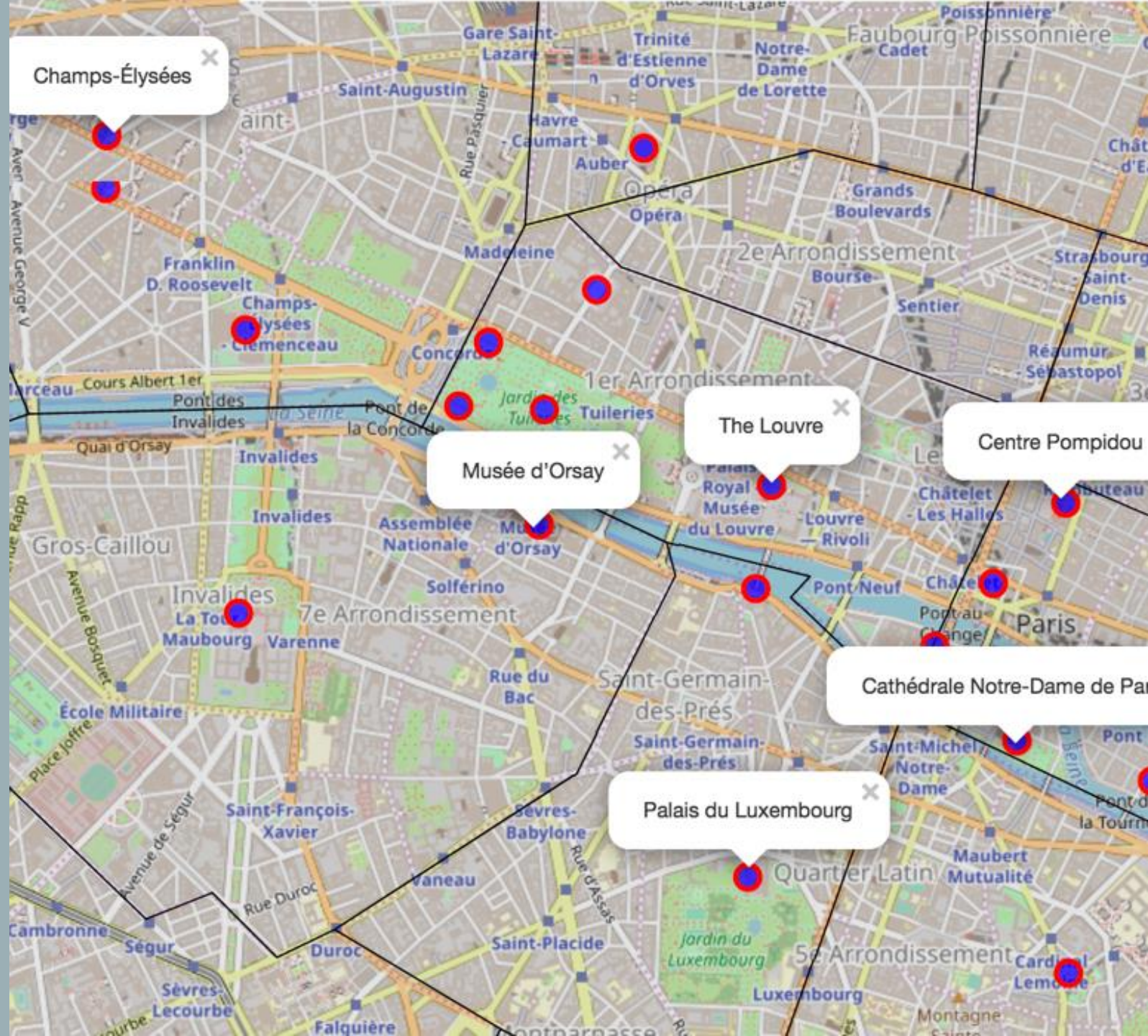
MAJOR LANDMARKS

I created a map that showed the top landmarks of Paris according to users on Google, Lonely Planet, and other travel websites.



UP CLOSE VIEW

This close up map shows in detail the location of a few major landmarks, including the Louvre, the Champs-Élysées, and the Musée d'Orsay.

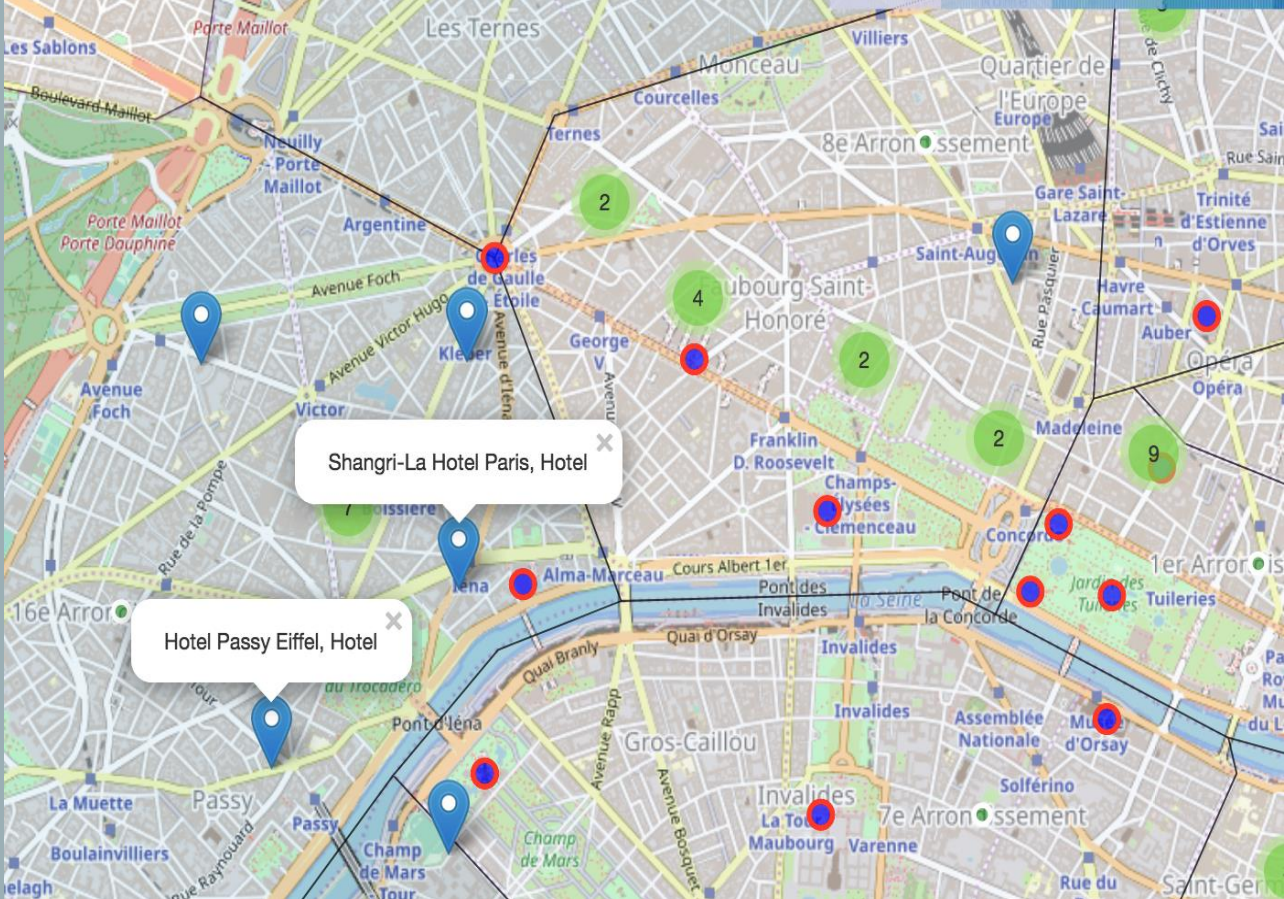


CLUSTERING VENUES
USING FOURSQUARE
DATA

We downloaded venues data from Foursquare and clustered the venues and venue category by arrondissement. We created the table below which shows the top 10 most common venues per arrondissement.

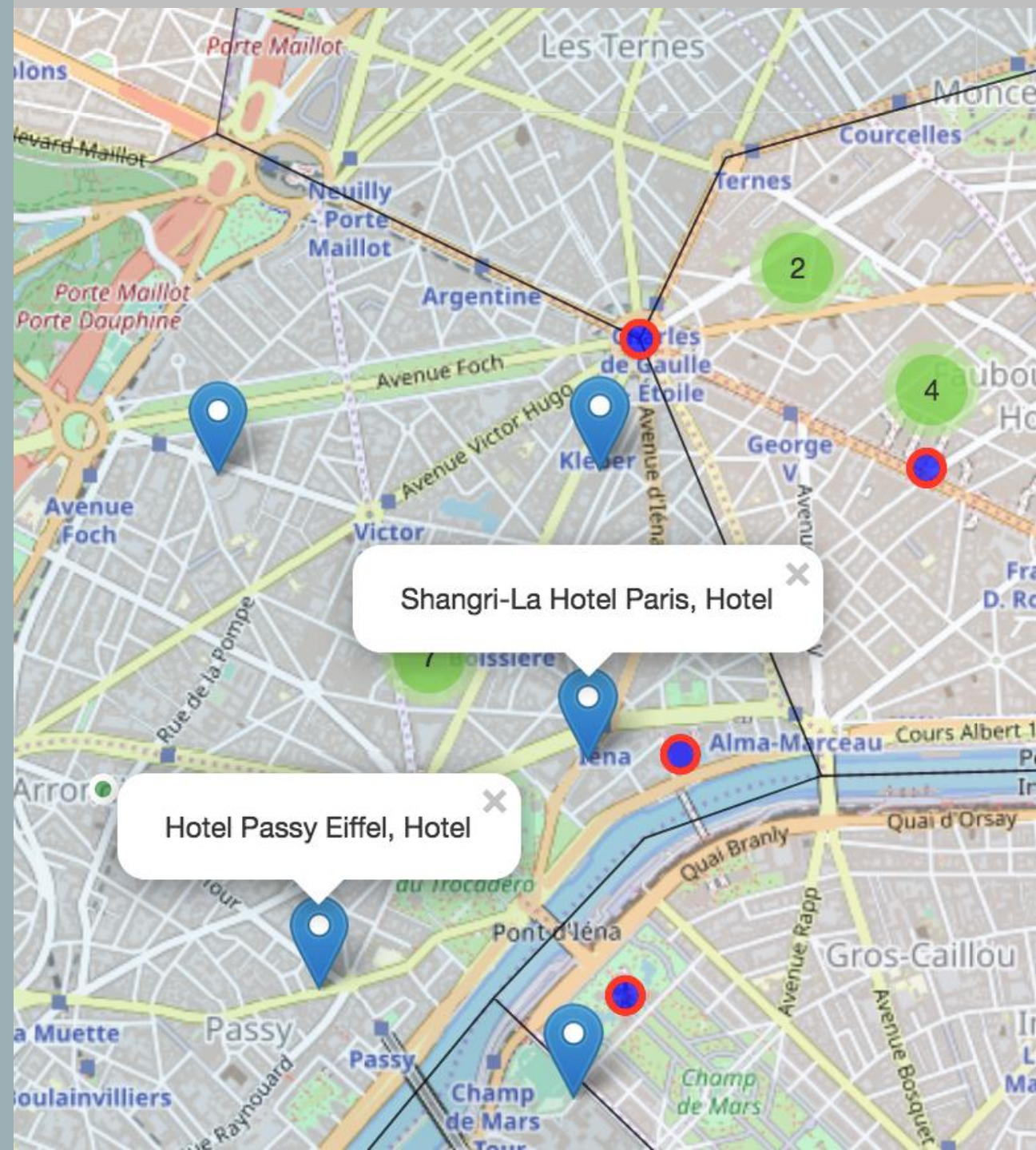
Arrondissement	Latitude	Longitude	Clust r Label	1st Most Common Venue	2nd Most Common Venue	3th Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1st	48.864614	2.334396	4	Hotel	Plaza	Historic Site	French Restaurant	Cocktail Bar	Art Museum	Boutique	Italian Restaurant	Garden	Dessert Shop
2nd	48.868743	2.341688	3	Cocktail Bar	French Restaurant	Wine Bar	Hotel	Pizza Place	Concert Hall	Corsican Restaurant	Candy Store	Museum	Szechuan Restaurant
3rd	48.864212	2.360936	3	French Restaurant	Italian Restaurant	Bookstore	Café	Bakery	Hotel	Clothing Store	Cocktail Bar	Japanese Restaurant	Sandwich Place
4th	48.856202	2.355619	1	French Restaurant	Plaza	Cocktail Bar	Japanese Restaurant	Museum	Hotel	Beer Store	Tapas Restaurant	Burger Joint	Market
5th	48.846059	2.344523	1	French Restaurant	Plaza	Wine Bar	Bistro	Dessert Shop	Restaurant	Ice Cream Shop	Fountain	Seafood Restaurant	Tea Room
6th	48.850433	2.332951	0	French Restaurant	Hotel	Café	Cheese Shop	Coffee Shop	Creperie	Department Store	Furniture / Home Store	Garden	Tailor Shop
7th	48.857028	2.320195	0	French Restaurant	Historic Site	Garden	Plaza	Pastry Shop	Art Museum	Asian Restaurant	Lounge	Chocolate Shop	Hotel
8th	48.877316	2.317261	2	Hotel	French Restaurant	Japanese Restaurant	Gourmet Shop	Italian Restaurant	Bar	Clothing Store	Park	Cosmetics Shop	Art Gallery
9th	48.876019	2.339962	4	French Restaurant	Bakery	Hotel	Italian Restaurant	Indie Movie Theater	Scenic Lookout	Cheese Shop	Chocolate Shop	Church	Cocktail Bar
10th	48.876106	2.359910	0	Coffee Shop	French Restaurant	Cambodian Restaurant	Bar	Thai Restaurant	Pizza Place	Chinese Restaurant	Gastropub	Taco Place	Theater
11th	48.858416	2.379703	0	French Restaurant	Wine Bar	Bistro	Bar	Cocktail Bar	Pizza Place	Italian Restaurant	Restaurant	Park	Organic Grocery
12th	48.839615	2.395752	2	French Restaurant	Park	Bakery	Hotel	Plaza	Italian Restaurant	Bar	Garden	Farmers Market	Bistro
13th	48.832397	2.355583	2	French Restaurant	Vietnamese Restaurant	Thai Restaurant	Italian Restaurant	Café	Hotel	Bar	Bakery	Park	Supermarket
14th	48.833059	2.326959	3	French Restaurant	Hotel	Japanese Restaurant	Italian Restaurant	Bistro	Creperie	Bar	Dessert Shop	Vietnamese Restaurant	Museum
15th	48.841370	2.300383	3	French Restaurant	Hotel	Bakery	Bistro	Gym / Fitness Center	Plaza	Korean Restaurant	Italian Restaurant	Park	Lebanese Restaurant
16th	48.863171	2.275765	3	French Restaurant	Hotel	Italian Restaurant	Art Museum	Bakery	Plaza	Hotel Bar	Gym / Fitness Center	Garden	Museum
17th	48.884224	2.322364	0	French Restaurant	Hotel	Bistro	Bar	Bakery	Italian Restaurant	Plaza	Wine Bar	Dessert Shop	Beer Bar
18th	48.890012	2.346467	0	French Restaurant	Italian Restaurant	Pizza Place	Bar	Bistro	Music Venue	Bakery	Wine Shop	Coffee Shop	Restaurant
19th	48.889343	2.384360	2	French Restaurant	Restaurant	Multiplex	Japanese Restaurant	Bistro	Café	Concert Hall	Bar	Park	Pizza Place
20th	48.865042	2.398929	4	Bar	French Restaurant	Cocktail Bar	Pizza Place	Bakery	Italian Restaurant	Vietnamese Restaurant	Music Venue	Moroccan Restaurant	Mexican Restaurant

HOTELS



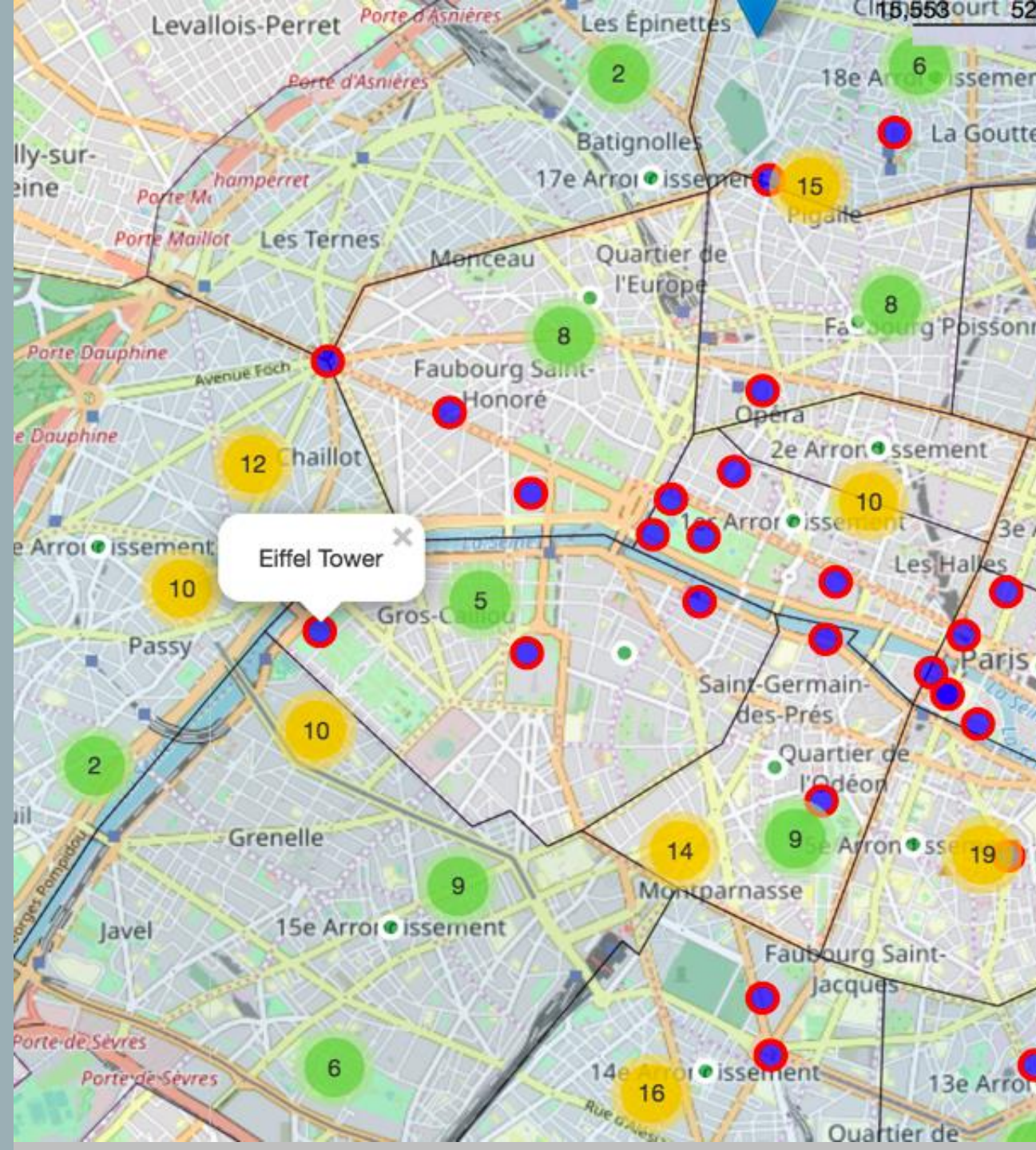
HOTELS

HOTELS



FRENCH CUISINE

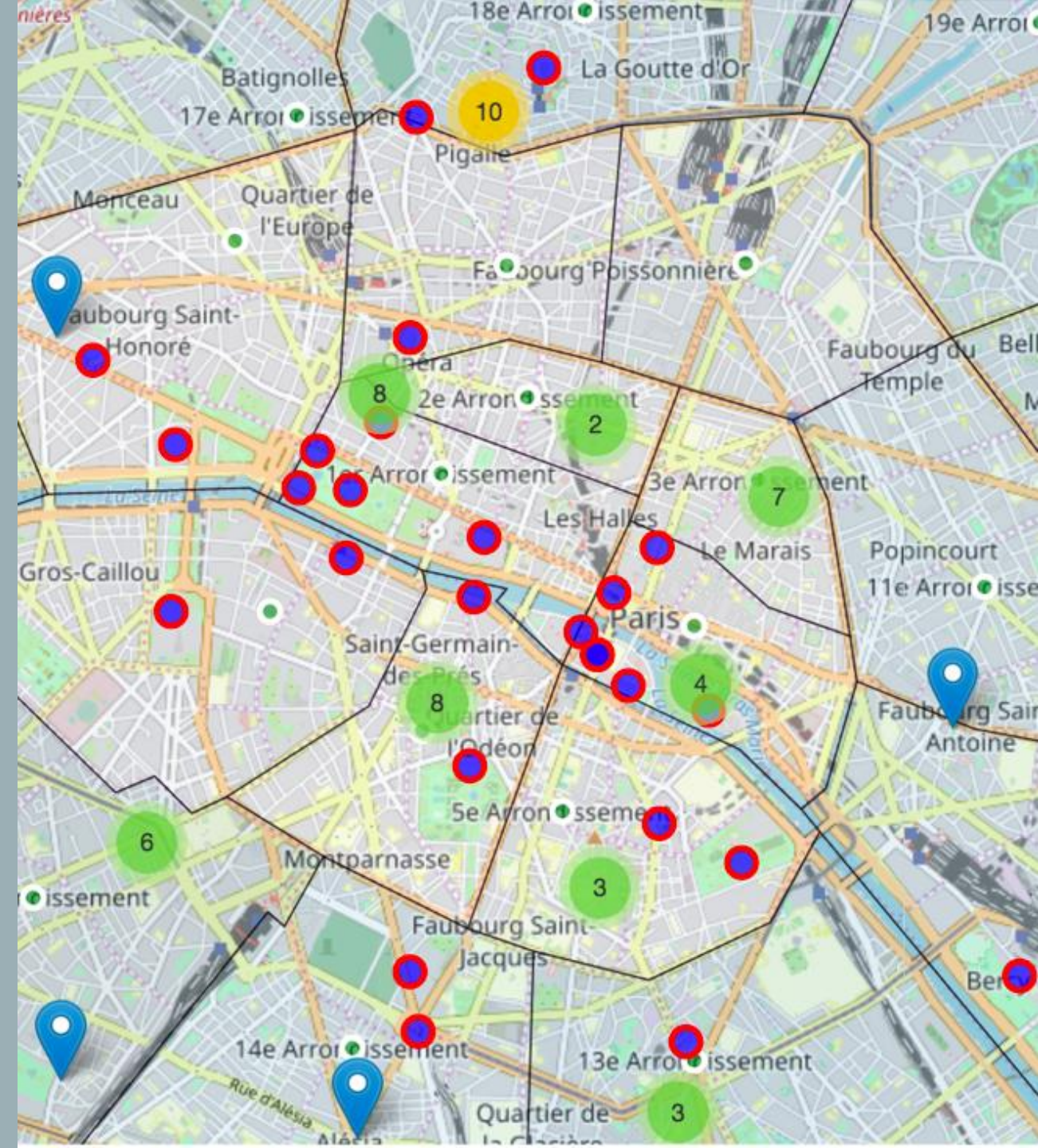
If you were near the Eiffel Tower and are in the mood for French food, you have over 30 options around you within a short walk of the Tower. Besides the two restaurants that are within the Eiffel Tower complex, you can also head over to Le Casse Noix or Pottoka.



DESSERT

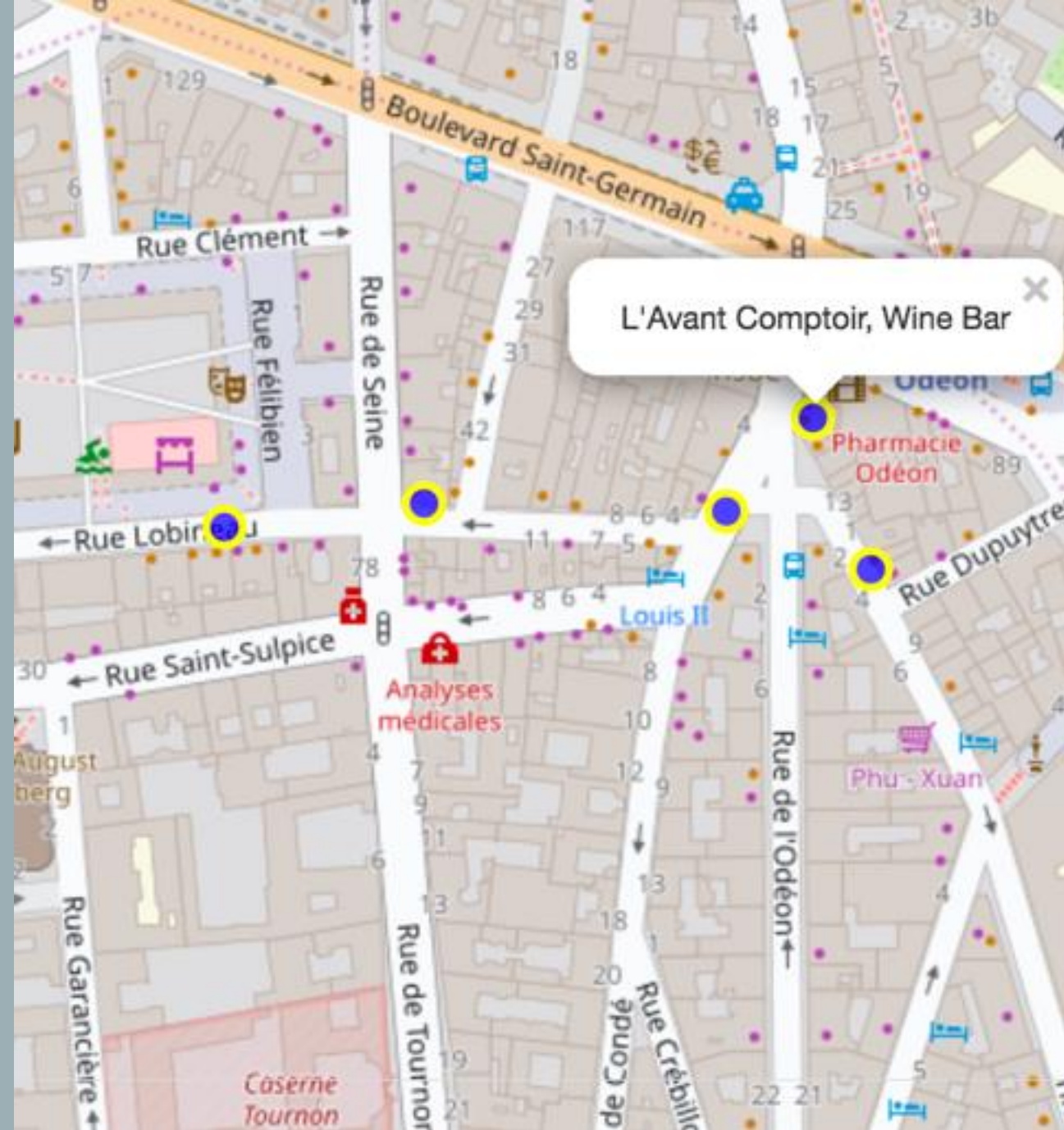
No trip to Paris is complete without a visit(s) to a local dessert shop for a crepe, a soufflé, or another delish treat. Fortunately, Paris has no shortage of sweet shops all around the city, perfect for a short pitstop before exploring the next museum or public plaza.

The green clusters are all dessert options around the city



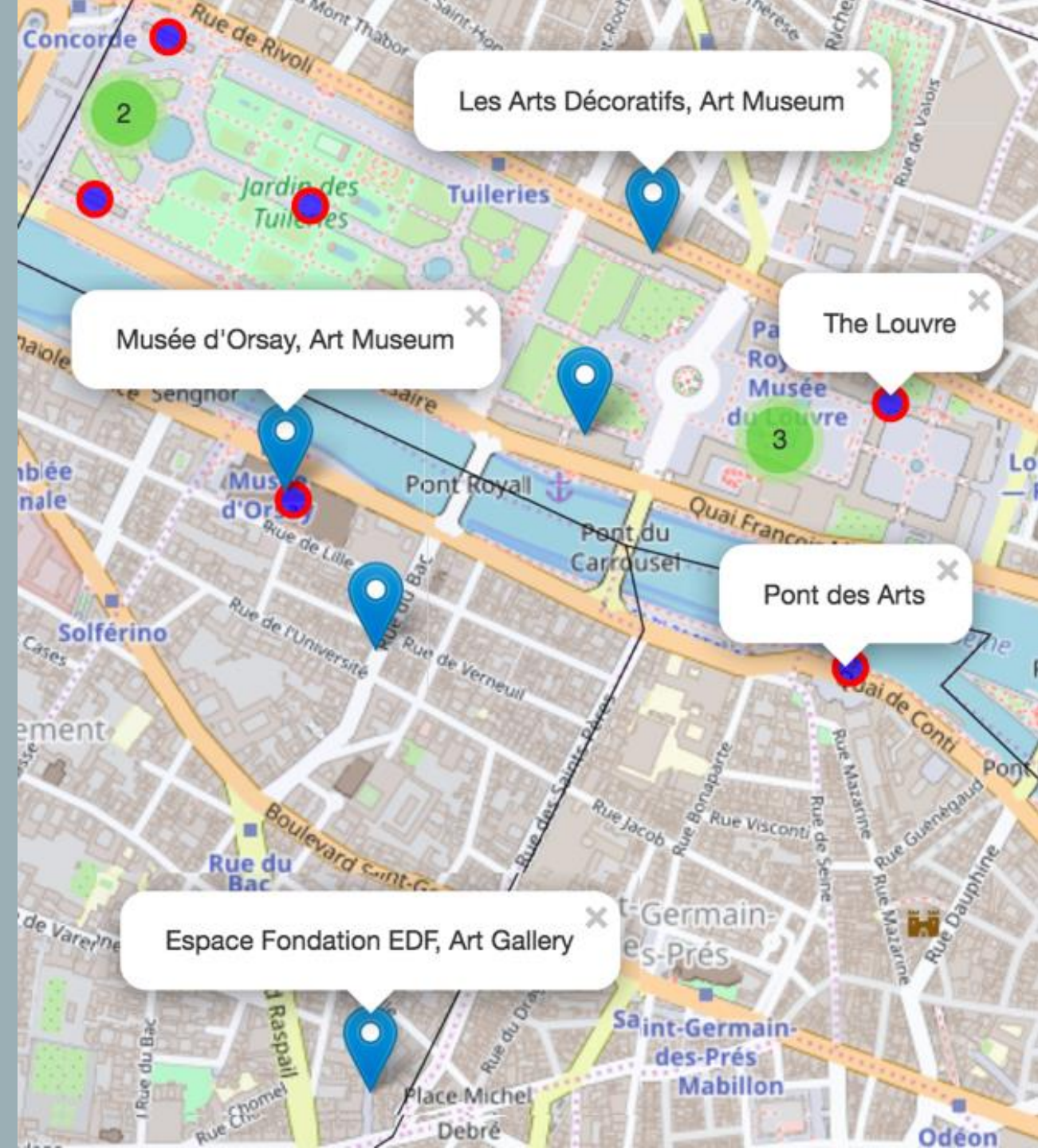
DRINKS AND NIGHTLIFE

The Latin Quarter in the 6th Arrondissement is famous for its nightlife and bars. If you're hoping to participate in a Paris bar crawl, this is the place to be.



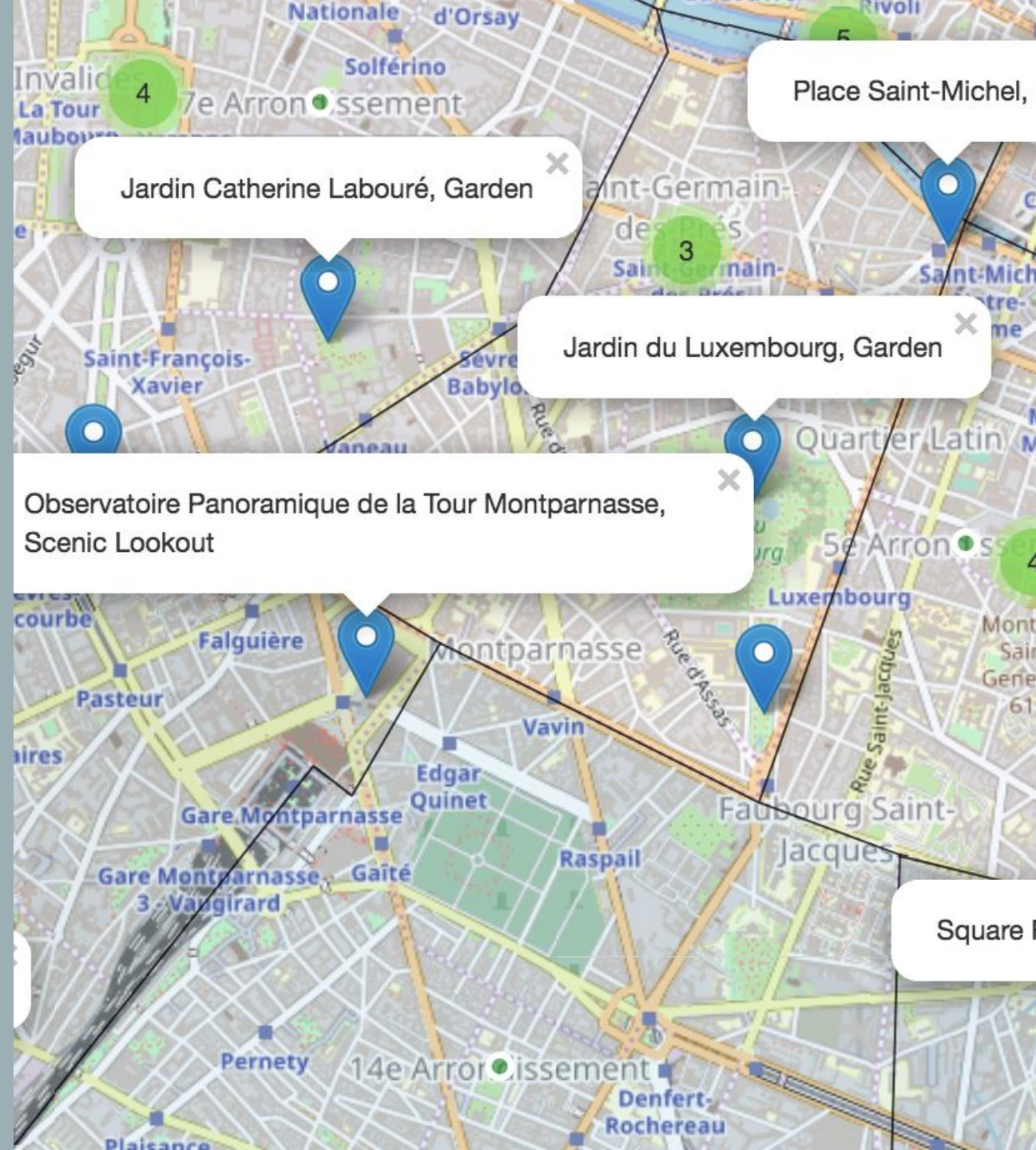
MUSEUMS

For museum lovers, Paris is the mecca. The hardest part is deciding which museum to visit and for how long. Museums featured in our data gathering range from art museums, galleries, and exhibits to history and science museums. Below is a map featuring some museums in blue pin/clusters among other famous landmarks in blue/red dots.



OUTDOOR SIGHTS

Paris is well known for its city planning, featuring green spaces and lookouts around the city, including beautiful gardens, parks, and public plazas. Below is a detailed look in the areas surrounding the famous Luxembourg Gardens, in the 5th, 6th, and 7th Arrondissements



SHOPPING

Paris is the fashion capital of the world and there is no shortage of boutiques, malls, and specialty shops for even the most prolific shopaholic. The 8th Arrondissement features many designer brands and other luxury stores selling clothes, handbags, watches, and jewelry.



- Head over to the 7th Arrondissement for a full day of exploring! Up first, the famous **Eiffel Tower**, along the River Seine. You can choose to make your way to the top or take pictures around the surrounding garden and plaza.
- Have yourself a picnic on the green gardens surrounding the Eiffel Tower. You can visit the nearby **Marché de Saxe Farmers Market** to pick up farm grown picnic food.
- Sit down for some afternoon tea at the nearby **Aux Cerises Tea Room**.
- Learn more about France's military history by visiting **Les Invalides** complex, which features museums and monuments.
- There are many local French restaurants to try out, including more than 30 within walking distance from the Eiffel Tower. Some of the closest restaurants include **Le Jules Verne** and **Restaurant 58 Tour Eiffel**.
- After dinner, stroll around the Seine as you wait for the Eiffel Tower to light up in the night sky. Perhaps stop by for dessert at **Boulangerie Desgranges** across the river.

DAY 1

- Start your day at the west end of the Champs-Élysées at the famous landmark, the **Arc de Triomphe**. Built 1836 to honor those who died during the French Revolution and the Napoleonic Wars, this is perhaps Paris's most well-known landmark after the Eiffel Tower.
- Stroll down the most famous street in the world, the Champs-Élysées. Browse the many boutiques and luxury stores that line its sides as you head east.
- Make a stop at the **The Grand Palais** and admire its architecture.
- Stop by the **Ladurée Paris Royale** bakery for a quick lunch or picnic items. Looking for something more substantial? Le Dalí is a nearby French restaurant.
- Enjoy the weather and the slow Parisian lifestyle by grabbing a bench at the **Tuileries Garden** for some people watching.
- Cross the river to the **Musée d'Orsay**, where you can spend the late afternoon among famous French artworks.
- For dinner, the French restaurants **L'Atelier de Joël Robuchon** or **Guy Savoy** are close by. The bistro **L'Avant-Comptoir des Cochons** is also close by.
- For a nightcap, **Prescription Cocktail Club** and **Chez Nous** wine bar are not too far away.

DAY 2

- Go early to **Le Louvre** to beat the crowds and get the museum to yourself. Be sure to say hi to the Mona Lisa.
- Sample some French cheese at **Fromagerie Barthélemy** and pick up some items for a picnic lunch at the **Palais du Luxembourg** and its surrounding gardens.
- The **Pantheon** is a short walk away from the Garden and is a mausoleum containing the remains of distinguished French citizens.
- Craving some seafood? **L'Avant Comptoir de la Mer** has you covered. How about some Italian? Head over to **Oenosteria**.
- End the night by visiting the Latin Quarters for some drinks at a local bar. Crowd favorites include **Castor Club** or wine bar **L'Avant Comptoir**.
- Alternatively, enjoy an indie film at **La Filmothèque du Quartier Latin** or a performance at the **Odéon – Théâtre de l'Europe**.

DAY 3

- Begin the day along the Seine at **Cathédrale Notre-Dame de Paris**, the famous cathedral known for its architecture.
- If you're still not tired of museums, the **Centre Pompidou** is a modern museum with interesting architecture.
- Other close by landmarks include the small islands, **Île Saint-Louis** and **Île de la Cité**, as well as **La Conciergerie** and **Saint-Jacques Tower**
- Ready for another picnic by the Seine? Visit **Fromagerie Laurent Dubois** for food. Nearby restaurants include **Le Petit Châtelet**, **Comme chai Toi**, or **Anahuacalli**.
- Make the trek across the Seine to catch a performance in the Bastille neighborhood. Venues include **Opéra Bastille** for opera or **Café de la Danse** for modern music.
- Food options near the venue include Gaspard de la Nuit (French), Nove (Italian), and Café Ginger (Asian fusion/Vegan) for dinner.
- **La Moustache Blanche** and **Berliner Wunderbar** are good options for drinks.

DAY 4

- Make a day trip trek out to the Palace of Versailles and explore its grand architecture and lush gardens.
- Disneyland Paris is another option to the far east of the city.
- This can also be a catch up day to do any activities you weren't able to squeeze in during the previous few days or to wander around Paris and find a new adventure!

DAY 5

CONCLUSION

- The itinerary I created made many assumptions on time, money, weather, and duration of stay.
- I want to emphasize that itineraries are just general guidelines and travelers can choose to deviate if, say, they find the Louvre to be only an hour visit or that reading in the Jardin de Luxembourg should be an all-day activity accompanied by French cheese and wine.
- I learned a lot about scraping data, visualizing it, and making maps that can provide guidance for creating a travel plan.
- I hope to further explore venue tips, ratings, and distance between venues.
- I can't wait for my first trip to Paris!