



Hotels & Venues in Paris

By Oscar F. D’Cuire

Introduction

Background

Paris is a beautiful city. 11 years ago I fell in love with her. I was participating in a program in France so I was able to visit the city many times. As a tourist I was in awe with the immensity of the city, the cultural diversity and the broad range of things to do. It has to be this way, with a population over 2 million Paris is known as one of Europe's cultural capitals. (Office du Tourisme et des Congrès, 2018)

It’s also very known that tourism is one of France’s main features and the base of the country’s 9% GDP. Paris received approximately 24.5 million visitors in 2018, and considering that is one of the must-see places in France it will be very useful to design a tool that allows anyone who’s interested to find venues and activities near the hotel locations.

Problem

This project aims to answer the following questions: 1. Is it possible to classify hotels according to the venues available and current events held in Paris? 2. What will be the best borough in terms of proximity to venues and events in Paris?

Interests

Anyone with interests of visiting Paris. Or perhaps hotel owners or investors who are analyzing any spot in Paris to install a new hotel based on actual venues and possible events held in the city.

Data

The process of data collection will be an easy one. The French government is supporting an initiative related to accomplishing specific goals regarding open data. This will be helpful towards the completion of the project.

Data used

Paris is organized in 20 boroughs, called "arrondissements". I’ll be using data related to the borough, which will be the base for setting up the project data. This data will be obtained from Paris’ Open Data Site (<https://opendata.paris.fr>) using the API:



	Borough Id	Short name	Long name	Latitude	Longitude
0	1	1er Ardt	Louvre	48.862563	2.336443
1	2	2ème Ardt	Bourse	48.868279	2.342803
2	3	3ème Ardt	Temple	48.862872	2.360001
3	4	4ème Ardt	Hôtel-de-Ville	48.854341	2.357630
4	5	5ème Ardt	Panthéon	48.844443	2.350715

For every borough, I’ll analyze the hotels. Data from the hotels can be obtained from Tourpedia, a site that collects information from Facebook, Foursquare, Bookings and Google (<http://tourpedia.org/api/getPlaces?category=accommodation&location=Paris&name=>):

	id	name	address	lat	lng
0	231609	Pages d'histoire Librairie Clio	8 Rue Bréa, Paris, France	48.843165	2.329972
1	231038	Hotel Résidence des Halles	4 Rue des Halles, Paris, France	48.859223	2.347343
2	231998	Centre d'animation Maurice Ravel	6 Avenue Maurice Ravel, Paris, France	48.841345	2.411647
3	231934	Laforet Immobilier	273 Rue des Pyrénées, Paris, France	48.867824	2.396152
4	231930	Atlanthe Immobilier	86 Rue de Maubeuge, Paris, France	48.879690	2.350003

In order to analyze each hotel, I’ll consider data from current events held in Paris obtained from Paris’ Open Data Site (<https://opendata.paris.fr>):

	id	name	category	end_date	access	address	lat	lon	zipcode
0	82415	Visite guidée : Montmartre au cinéma	Animations -> Visite guidée	2019-08-17T15:00:00+00:00	libre	151B, rue Marcadet	48.891247	2.338471	75018
1	82407	Les différentes sources de financement de votr...	Animations -> Atelier / Cours	2019-09-18T19:30:00+00:00	reservation	54 rue Jean-Baptiste Pigalle	48.881041	2.336020	75009
2	82395	La Bibliothèque Edmond Rostand au square I	Animations -> Loisirs / Jeux	2019-08-08T10:30:00+00:00	libre	29 boulevard de Reims	48.890589	2.299701	75017
3	82389	Fête des jardins : bibliothèque à la Butte-du-...	Événements -> Fête / Parade	2019-09-14T15:00:00+00:00	libre	5, avenue Debidour	48.881898	2.398832	75019
4	82385	Concours de confitures d'été, 2ème édition	Animations -> Loisirs / Jeux	2019-09-07T15:30:00+00:00	libre	132 rue de la Glacière	48.827294	2.342083	75013

As Paris venues using the Foursquare API(foursquare.com) :

	Hotel	Hotel Latitude	Hotel Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Pages d'histoire Librairie Clio	48.843165	2.329972	Amorino	48.844723	2.332110	Ice Cream Shop
1	Pages d'histoire Librairie Clio	48.843165	2.329972	Le Relais de l'Entrecôte	48.842525	2.328737	Steakhouse
2	Pages d'histoire Librairie Clio	48.843165	2.329972	Le Timbre	48.844240	2.329868	French Restaurant
3	Pages d'histoire Librairie Clio	48.843165	2.329972	Le Six Hotel	48.843793	2.328207	Hotel
4	Pages d'histoire Librairie Clio	48.843165	2.329972	Le Bistrot des Campagnes	48.840981	2.330782	French Restaurant
5	Pages d'histoire Librairie Clio	48.843165	2.329972	La Rotonde	48.842403	2.329193	French Restaurant
6	Pages d'histoire Librairie Clio	48.843165	2.329972	Le Bistrot du Dôme	48.842079	2.329204	Seafood Restaurant
7	Pages d'histoire Librairie Clio	48.843165	2.329972	My Noodles	48.841457	2.331435	Noodle House
8	Pages d'histoire Librairie Clio	48.843165	2.329972	Toritcho	48.842578	2.326067	Japanese Restaurant
9	Pages d'histoire Librairie Clio	48.843165	2.329972	Rosebud	48.841735	2.328106	Cocktail Bar
10	Pages d'histoire Librairie Clio	48.843165	2.329972	Théâtre Lucernaire	48.844201	2.330273	Theater

So, basically I will try to combine venues and events with hotels in order to determine which are the “best” hotels. And then I will analyze the boroughs.



Methodology

Data Preparation and Cleansning

Boroughs

Paris Borough’s information has an INSEE Code. INSEE Code it’s a special code provided by the French National Institute of Statistics in order to assign a specific code to every place in France. In order to help relate activities, venues and hotels to each borough I related each INSEE Code with their Postal Code.

The information of the twenty boroughs is the following:

Borough Id	Short name	Long name	INSEE	Latitude	Longitude	Polygon	index	INSEE	Postal Code	
0	1	1er Ardt	Louvre	75101	48.862563	2.336443	[[[2.328007329038849, 48.86991742140715], [2.3...	8	75101	75001
1	2	2ème Ardt	Bourse	75102	48.868279	2.342803	[[[2.351518483670821, 48.8644258050741], [2.35...	9	75102	75002
2	3	3ème Ardt	Temple	75103	48.862872	2.360001	[[[2.363828096062925, 48.86750443060333], [2.3...	5	75103	75003
3	4	4ème Ardt	Hôtel-de-Ville	75104	48.854341	2.357630	[[[2.368512371393433, 48.85573412813671], [2.3...	7	75104	75004
4	5	5ème Ardt	Panthéon	75105	48.844443	2.350715	[[[2.364433128355796, 48.84614003688701], [2.3...	13	75105	75005
5	6	6ème Ardt	Luxembourg	75106	48.849130	2.332898	[[[2.344592677496354, 48.85404922924987], [2.3...	6	75106	75006
6	7	7ème Ardt	Palais-Bourbon	75107	48.856174	2.312188	[[[2.320902853673182, 48.86305739061689], [2.3...	15	75107	75007
7	8	8ème Ardt	Élysée	75108	48.872721	2.312554	[[[2.325836254471964, 48.86956219698904], [2.3...	2	75108	75008
8	9	9ème Ardt	Opéra	75109	48.877164	2.337458	[[[2.339776543083362, 48.88202934722508], [2.3...	12	75109	75009
9	10	10ème Ardt	Entrepôt	75110	48.876130	2.360728	[[[2.364685889119478, 48.884369043407936], [2....	18	75110	75010
10	11	11ème Ardt	Popincourt	75111	48.859059	2.380058	[[[2.3962365763098292, 48.85415458748719], [2....	10	75111	75011
11	12	12ème Ardt	Reuilly	75112	48.834974	2.421325	[[[2.413879624300607, 48.83357143972265], [2.4...	4	75112	75012
12	13	13ème Ardt	Gobelins	75113	48.828388	2.362272	[[[2.37491337925709, 48.838008954402476], [2.3...	3	75113	75013
13	14	14ème Ardt	Observatoire	75114	48.829245	2.326542	[[[2.333806501627019, 48.84060921979981], [2.3...	11	75114	75014
14	15	15ème Ardt	Vaugirard	75115	48.840085	2.292826	[[[2.299322310264648, 48.852174427333274], [2....	14	75115	75015
15	16	16ème Ardt	Passy	75116	48.860392	2.261971	[[[2.274268195957375, 48.87836539314277], [2.2...	19	75116	75016
16	17	17ème Ardt	Batignolles-Monceau	75117	48.887327	2.306777	[[[2.295166912564455, 48.873955232398906], [2....	0	75117	75017
17	18	18ème Ardt	Buttes-Montmartre	75118	48.892569	2.348161	[[[2.365803615296344, 48.885544294580384], [2....	1	75118	75018
18	19	19ème Ardt	Buttes-Chaumont	75119	48.887076	2.384821	[[[2.38942869613216, 48.90121811823448], [2.39...	16	75119	75019
19	20	20ème Ardt	Ménilmontant	75120	48.863461	2.401188	[[[2.412765012638637, 48.87547447749336], [2.4...	17	75120	75020

Hotels

At the moment of executing the code in the notebook, I was able to retrieve information for 758 hotels.

```
In [8]: #taking an overall look at hotels df
dfHotels.shape

Out[8]: (758, 5)
```

Events

A total of 4363 events were obtained at the moment of querying the data from the open data source. There is a wide range variety of events.



Activity Id	
Category	
Animations -> Atelier / Cours	351
Animations -> Autre animation	66
Animations -> Balade	24
Animations -> Conférence / Débat	387
Animations -> Lecture / Rencontre	177
Animations -> Loisirs / Jeux	76
Animations -> Stage	65
Animations -> Visite guidée	90
Concerts -> Autre concert	189
Concerts -> Chanson française	40
Concerts -> Classique	362
Concerts -> Folk	12
Concerts -> Hip-Hop	63
Concerts -> Jazz	398
Concerts -> Musiques du Monde	175
Concerts -> Pop / Variété	38
Concerts -> Reggae	6
Concerts -> Rock	228
Concerts -> Soul / Funk	8
Concerts -> Électronique	86
Expositions -> Art Contemporain	83
Expositions -> Autre expo	41
Expositions -> Beaux-Arts	41
Expositions -> Design / Mode	9
Expositions -> Histoire / Civilisations	26
Expositions -> Illustration / BD	20

The most common events (at the moment of generating the report) are: Concerts→ Jazz (398), Animations → Conférence / Debat (387), Concerts → Classique (362) and Animations →Atelier/Cours (351).

Venues

Venues were obtained using the Foursquare API. When importing the venue data, originally, there were 60133 venues. However, when browsing the information one can check that, due to hotel proximity, the following issues arise:

- There are a lot of venues that appear two or more times on the list.
- Some venues have postal codes that don’t belong to Paris Borough’s postal codes.
- Some of the venues are hotels

```
In [17]: paris_v2.sort_values(by=['postal_code', 'Venue', 'Venue Latitude'])

Out[17]:
```

	Hotel	Hotel Latitude	Hotel Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	phys_add	postal_code
22060	Hotel De Suede Saint Germain	48.852568	2.319117	Hôtel Le Petit Chomel	48.852066	2.325292	Hotel	21 Avenue Jean Jaurès (Boulevard Raspail)	01000
32754	Hotel Matignon	48.854814	2.320650	Hôtel Le Petit Chomel	48.852066	2.325292	Hotel	21 Avenue Jean Jaurès (Boulevard Raspail)	01000
45308	Hotel de Suede	48.852587	2.319328	Hôtel Le Petit Chomel	48.852066	2.325292	Hotel	21 Avenue Jean Jaurès (Boulevard Raspail)	01000
29046	Hotel Le Clos d'Alésia	48.826125	2.324461	Blo c' Bon	48.828924	2.323334	Supermarket	10 boulevard Gambetta (Rue des Plantes)	06000
49379	Hotels le Richemont les Amaranthes	48.828551	2.317082	Blo c' Bon	48.828924	2.323334	Supermarket	10 boulevard Gambetta (Rue des Plantes)	06000
26037	Hotel Felicien Paris	48.849343	2.274337	La Pieta	48.846409	2.278598	Italian Restaurant	8 avenue Emile Zola (Quai André Citroën)	71015
54779	Platine Hotel	48.847417	2.283252	La Pieta	48.846409	2.278598	Italian Restaurant	8 avenue Emile Zola (Quai André Citroën)	71015
291	Green hotels Confort Paris 13	48.827356	2.371985	Maki Sushi Tokyo	48.827912	2.371502	Japanese Restaurant	44 rue de Tolbiac (Rue de Palay)	73013
36406	Hotel Paris Bercy Rive Gauche	48.823527	2.371588	Maki Sushi Tokyo	48.827912	2.371502	Japanese Restaurant	44 rue de Tolbiac (Rue de Palay)	73013
58087	Societe Hoteliere Bibliotheque	48.829175	2.374450	Maki Sushi Tokyo	48.827912	2.371502	Japanese Restaurant	44 rue de Tolbiac (Rue de Palay)	73013
4603	Art Hotel Eiffel	48.848729	2.298349	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
11578	Europe Hotel Paris Eiffel	48.849588	2.296966	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
12007	First Hotel	48.847499	2.302338	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
26928	Hotel Grenelle	48.848561	2.298815	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
38356	Hotel Relais Saint-Charles	48.850517	2.293369	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
58791	Splendid Hotel Paris	48.848803	2.296263	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015
59568	Tourisme Hotel	48.849599	2.298321	Le Père Claude	48.850418	2.300114	French Restaurant	51 avenue de la Motte-Picquet	74015

Hence, it is necessary to clean the information regarding to venues.



After cleaning the data, there are a total of 6738 venues.

In [21]:

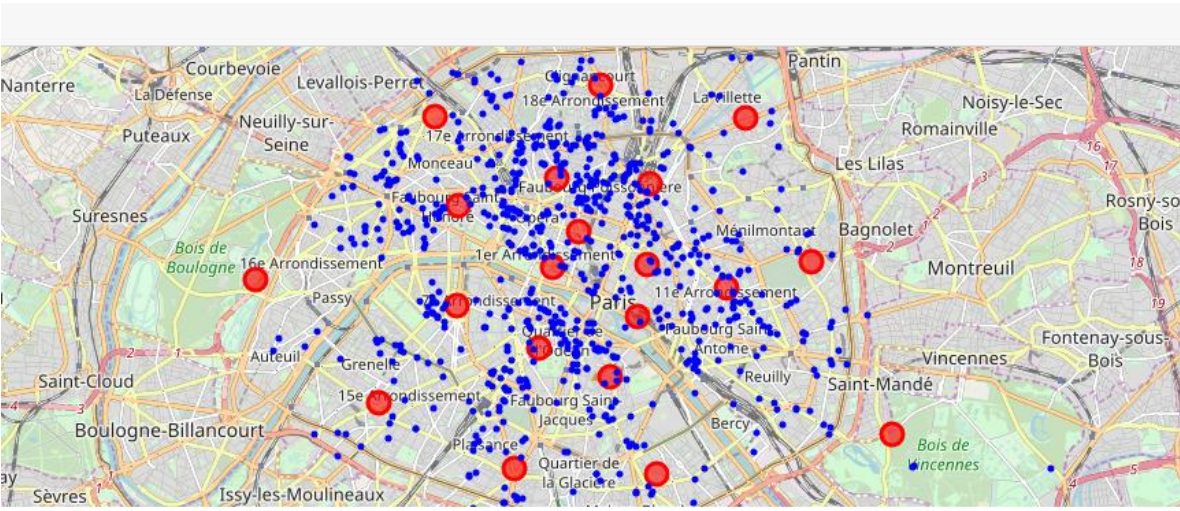
paris_v3.sort_values(by=['postal_code', 'Venue', 'Venue Latitude'])

Out[21]:

	Venue	Venue Latitude	Venue Longitude	Venue Category	phys_add	postal_code
46679	59 Rivoli	48.859172	2.345648	Art Gallery	59 rue de Rivoli (Rue des Déchargeurs)	75001
35320	A Casaluna	48.866025	2.338895	Corsican Restaurant	6 rue de Beaujolais	75001
56725	A la Civette	48.863188	2.335915	Smoke Shop	157 rue Saint-Honoré	75001
41747	Acne Studios	48.865448	2.338579	Clothing Store	124 galerie Valois	75001
56662	Aesop	48.864158	2.333601	Cosmetics Shop	256 rue Saint Honoré	75001
56737	Aki	48.866147	2.335414	Japanese Restaurant	11 bis rue Sainte-Anne	75001
53744	Alexander McQueen	48.867311	2.326958	Boutique	372 rue Saint-Honoré	75001
54185	Amorino	48.863472	2.346386	Ice Cream Shop	9 rue Montorgueil	75001
56307	Amorino	48.864215	2.324462	Ice Cream Shop	Jardin des Tuileries (Place de la Concorde)	75001
56651	Angelina	48.865090	2.328443	Tea Room	226 rue de Rivoli	75001
56316	Annick Goutal	48.866586	2.328506	Cosmetics Shop	14 rue de Castiglione	75001

Data Visualization

In order to get a glimpse at all the boroughs and their hotels, I prepared the following map:



Analysis

I created a one-hot encoding for the events and for the venues, dividing the data into boroughs. This helped categorize venues and events and helped find the top 10. With this, I was able to organize both dataframes into clusters.

Most common events (showing top 5):



	Borough Name	1st Most Common Event	2nd Most Common Event	3rd Most Common Event	4th Most Common Event	5th Most Common Event
0	75001	Concerts -> Jazz	Animations -> Atelier / Cours	Animations -> Conférence / Débat	Animations -> Loisirs / Jeux	Animations -> Visite guidée
1	75002	Animations -> Atelier / Cours	Animations -> Visite guidée	Animations -> Conférence / Débat	Spectacles -> Autre spectacle	Expositions -> Histoire / Civilisations
2	75003	Animations -> Conférence / Débat	Animations -> Atelier / Cours	Spectacles -> Jeune public	Expositions -> Photographie	Spectacles -> Projection
3	75004	Spectacles -> Projection	Animations -> Lecture / Rencontre	Spectacles -> Théâtre	Animations -> Conférence / Débat	Animations -> Atelier / Cours
4	75005	Animations -> Atelier / Cours	Animations -> Conférence / Débat	Spectacles -> Théâtre	Animations -> Visite guidée	Animations -> Lecture / Rencontre

Most common venues (showing top 5):

	Borough Name	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	75001	French Restaurant	Café	Japanese Restaurant	Plaza	Italian Restaurant
1	75002	French Restaurant	Cocktail Bar	Japanese Restaurant	Bakery	Italian Restaurant
2	75003	French Restaurant	Coffee Shop	Art Gallery	Café	Bakery
3	75004	French Restaurant	Ice Cream Shop	Italian Restaurant	Plaza	Cocktail Bar
4	75005	French Restaurant	Bar	Bakery	Café	Plaza

Results

Each borough was classified into two clusters (one corresponding to the venues and the other one corresponding to the events).

Events:



	Short name	Cluster Labels
0	1er Ardt	0
17	18ème Ardt	1
13	14ème Ardt	1
10	11ème Ardt	1
8	9ème Ardt	1
6	7ème Ardt	1
9	10ème Ardt	1
19	20ème Ardt	1
7	8ème Ardt	2
18	19ème Ardt	2
16	17ème Ardt	2
4	5ème Ardt	3
3	4ème Ardt	3
2	3ème Ardt	3
14	15ème Ardt	3
1	2ème Ardt	3
15	16ème Ardt	4
5	6ème Ardt	5
11	12ème Ardt	6
12	13ème Ardt	6

	Borough Name	Cluster Labels	Short name	1st Most Common Event	2nd Most Common Event	3rd Most Common Event	4th Most Common Event	5th Most Common Event	6th Most Common Event	7th Most Common Event	8th Most Common Event	9th Most Common Event	10th Most Common Event
0	75001	0	1er Ardt	Concerts -> Jazz	Animations -> Atelier / Cours	Animations -> Conférence / Débat	Animations -> Loisirs / Jeux	Animations -> Visite guidée	Concerts -> Musiques du Monde	Animations -> Stage	Spectacles -> Projection	Spectacles -> Théâtre	Animations -> Lecture / Rencontre
17	75018	1	18ème Ardt	Animations -> Atelier / Cours	Spectacles -> Théâtre	Concerts -> Rock	Concerts -> Électronique	Concerts -> Pop / Variété	Concerts -> Musiques du Monde	Concerts -> Autre concert	Spectacles -> Jeune public	Animations -> Visite guidée	Spectacles -> Projection
13	75014	1	14ème Ardt	Concerts -> Jazz	Concerts -> Autre concert	Animations -> Atelier / Cours	Animations -> Lecture / Rencontre	Spectacles -> Projection	Concerts -> Musiques du Monde	Concerts -> Rock	Animations -> Loisirs / Jeux	Animations -> Conférence / Débat	Événements -> Festival / Cycle
10	75011	1	11ème Ardt	Concerts -> Autre concert	Animations -> Conférence / Débat	Animations -> Atelier / Cours	Spectacles -> Théâtre	Concerts -> Musiques du Monde	Concerts -> Rock	Concerts -> Jazz	Animations -> Stage	Concerts -> Électronique	Événements -> Autre événement
8	75009	1	9ème Ardt	Animations -> Atelier / Cours	Animations -> Loisirs / Jeux	Animations -> Lecture / Rencontre	Animations -> Autre animation	Animations -> Conférence / Débat	Concerts -> Hip-Hop	Événements -> Soirée / Bal	Expositions -> Photographie	Spectacles -> Autre spectacle	Expositions -> Art Contemporain
6	75007	1	7ème Ardt	Animations -> Atelier / Cours	Animations -> Conférence / Débat	Expositions -> Art Contemporain	Concerts -> Classique	Concerts -> Électronique	Expositions -> Beaux-Arts	Expositions -> Histoire / Civilisations	Animations -> Loisirs / Jeux	Animations -> Lecture / Rencontre	Animations -> Stage
9	75010	1	10ème Ardt	Animations -> Atelier / Cours	Concerts -> Autre concert	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Rock	Spectacles -> Projection	Expositions -> Photographie	Événements -> Soirée / Bal	Animations -> Conférence / Débat	Concerts -> Musiques du Monde
19	75020	1	20ème Ardt	Concerts -> Musiques du Monde	Animations -> Atelier / Cours	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Autre concert	Événements -> Soirée / Bal	Concerts -> Rock	Concerts -> Hip-Hop	Spectacles -> Théâtre	Spectacles -> Projection

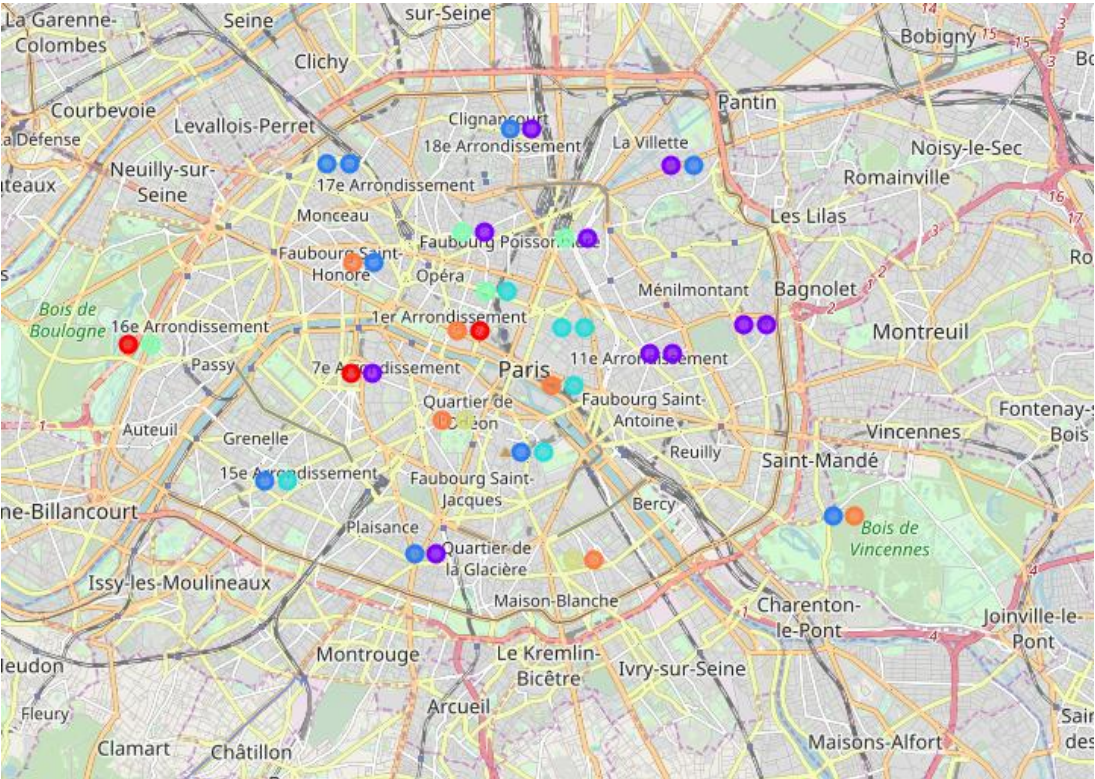
Venues:



	Short name	Cluster Labels
15	16ème Ardt	0
6	7ème Ardt	0
19	20ème Ardt	1
18	19ème Ardt	1
10	11ème Ardt	1
17	18ème Ardt	2
16	17ème Ardt	2
4	5ème Ardt	2
14	15ème Ardt	2
13	14ème Ardt	2
11	12ème Ardt	2
2	3ème Ardt	3
9	10ème Ardt	4
8	9ème Ardt	4
1	2ème Ardt	4
12	13ème Ardt	5
7	8ème Ardt	6
5	6ème Ardt	6
3	4ème Ardt	6
0	1er Ardt	6

	Borough Name	Cluster Labels	Short name	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
15	75016	0	16ème Ardt	French Restaurant	Italian Restaurant	Café	Plaza	Bakery	Japanese Restaurant	Supermarket	Museum	Pizza Place	Gym / Fitness Center
6	75007	0	7ème Ardt	French Restaurant	Italian Restaurant	Café	Plaza	Bakery	Coffee Shop	Restaurant	Bistro	Japanese Restaurant	Brasserie
19	75020	1	20ème Ardt	Bar	French Restaurant	Supermarket	Plaza	Bistro	Pizza Place	Bakery	Italian Restaurant	Theater	Metro Station
18	75019	1	19ème Ardt	French Restaurant	Bar	Café	Restaurant	Italian Restaurant	Plaza	Bistro	Pizza Place	Supermarket	Multiplex
10	75011	1	11ème Ardt	Bar	French Restaurant	Bistro	Restaurant	Wine Bar	Italian Restaurant	Café	Cocktail Bar	Vietnamese Restaurant	Pizza Place
17	75018	2	18ème Ardt	French Restaurant	Bar	Italian Restaurant	Bistro	Bakery	Plaza	Café	Supermarket	Wine Bar	Pizza Place
16	75017	2	17ème Ardt	French Restaurant	Italian Restaurant	Bar	Bakery	Bistro	Pizza Place	Restaurant	Japanese Restaurant	Gym / Fitness Center	Supermarket
4	75005	2	5ème Ardt	French Restaurant	Bar	Bakery	Café	Plaza	Creperie	Coffee Shop	Italian Restaurant	Indie Movie Theater	Science Museum
14	75015	2	15ème Ardt	French Restaurant	Italian Restaurant	Bakery	Japanese Restaurant	Bistro	Korean Restaurant	Supermarket	Café	Sandwich Place	Pizza Place
13	75014	2	14ème Ardt	French Restaurant	Italian Restaurant	Bar	Café	Bakery	Japanese Restaurant	Bistro	Pizza Place	Vietnamese Restaurant	Creperie
11	75012	2	12ème Ardt	French Restaurant	Bar	Italian Restaurant	Bakery	Supermarket	Bistro	Pizza Place	Sandwich Place	Japanese Restaurant	Café

Finally, to have a better visualization of the data I mapped both events and venues (their cluster classification in a new map). Venues are the left marker on each map, events are represented on the right marker on each map.



As seen on the map some of the clusters appear to be in the same clusters for venues and events.

Venues: Blue – Events: Purple (18, 14 Boroughs)

Venues:

75018	2	18ème Ardt	French Restaurant	Bar	Italian Restaurant	Bistro	Bakery	Plaza	Café	Supermarket	Wine Bar	Pizza Place
75014	2	14ème Ardt	French Restaurant	Italian Restaurant	Bar	Café	Bakery	Japanese Restaurant	Bistro	Pizza Place	Vietnamese Restaurant	Creperie

Events:

75018	1	18ème Ardt	Animations -> Atelier / Cours	Spectacles -> Théâtre	Concerts -> Rock	Concerts -> Electronique	Concerts -> Pop / Variété	Concerts -> Musiques du Monde	Concerts -> Autre concert	Spectacles -> Jeune public	Animations -> Visite guidée	Spectacles -> Projection
75014	1	14ème Ardt	Concerts -> Jazz	Concerts -> Autre concert	Animations -> Atelier / Cours	Animations -> Lecture / Rencontre	Spectacles -> Projection	Concerts -> Musiques du Monde	Concerts -> Rock	Animations -> Loisirs / Jeux	Animations -> Conférence / Débat	Evènements -> Festival / Cycle

Venues: Purple – Events: Purple (11, 20 Boroughs)

Venues:

75011	1	11ème Ardt	Bar	French Restaurant	Bistro	Restaurant	Wine Bar	Italian Restaurant	Café	Cocktail Bar	Vietnamese Restaurant	Pizza Place
75020	1	20ème Ardt	Bar	French Restaurant	Supermarket	Plaza	Bistro	Pizza Place	Bakery	Italian Restaurant	Theater	Metro Station

Events:

75011	1	11ème Ardt	Concerts -> Autre concert	Animations -> Conférence / Débat	Animations -> Atelier / Cours	Spectacles -> Théâtre	Concerts -> Musiques du Monde	Concerts -> Rock	Concerts -> Jazz	Animations -> Stage	Concerts -> Electronique	Evènements -> Autre évènement
75020	1	20ème Ardt	Concerts -> Musiques du Monde	Animations -> Atelier / Cours	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Autre concert	Evènements -> Soirée / Bal	Concerts -> Rock	Concerts -> Hip-Hop	Spectacles -> Théâtre	Spectacles -> Projection

Venues: Green – Events: Purple (9, 10 Boroughs)

Venues:



75010	4	10ème Ardt	French Restaurant	Bar	Indian Restaurant	Coffee Shop	Bistro	Café	Italian Restaurant	Restaurant	Pizza Place	Bakery
75009	4	9ème Ardt	French Restaurant	Italian Restaurant	Bistro	Coffee Shop	Theater	Bar	Restaurant	Cocktail Bar	Japanese Restaurant	Pizza Place

Events:

75009	1	9ème Ardt	Animations -> Atelier / Cours	Animations -> Loisirs / Jeux	Animations -> Lecture / Rencontre	Animations -> Autre animation	Animations -> Conférence / Débat	Concerts -> Hip-Hop	Évènements -> Soirée / Bal	Expositions -> Photographie	Spectacles -> Autre spectacle	Expositions -> Art Contemporain
75010	1	10ème Ardt	Animations -> Atelier / Cours	Concerts -> Autre concert	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Rock	Spectacles -> Projection	Expositions -> Photographie	Évènements -> Soirée / Bal	Animations -> Conférence / Débat	Concerts -> Musiques du Monde

Analyzing the events of the previous, they all belong to the same cluster (Cluster # 1).

75018	1	18ème Ardt	Animations -> Atelier / Cours	Spectacles -> Théâtre	Concerts -> Rock	Concerts -> Electronique	Concerts -> Pop / Variété	Concerts -> Musiques du Monde	Concerts -> Autre concert	Spectacles -> Jeune public	Animations -> Visite guidée	Spectacles -> Projection
75014	1	14ème Ardt	Concerts -> Jazz	Concerts -> Autre concert	Animations -> Atelier / Cours	Animations -> Lecture / Rencontre	Spectacles -> Projection	Concerts -> Musiques du Monde	Concerts -> Rock	Animations -> Loisirs / Jeux	Animations -> Conférence / Débat	Évènements -> Festival / Cycle
75011	1	11ème Ardt	Concerts -> Autre concert	Animations -> Conférence / Débat	Animations -> Atelier / Cours	Spectacles -> Théâtre	Musiques du Monde	Concerts -> Rock	Concerts -> Jazz	Animations -> Stage	Concerts -> Electronique	Évènements -> Autre événement
75009	1	9ème Ardt	Animations -> Atelier / Cours	Animations -> Loisirs / Jeux	Animations -> Lecture / Rencontre	Animations -> Autre animation	Animations -> Conférence / Débat	Concerts -> Hip-Hop	Évènements -> Soirée / Bal	Expositions -> Photographie	Spectacles -> Autre spectacle	Expositions -> Art Contemporain
75007	1	7ème Ardt	Animations -> Atelier / Cours	Animations -> Conférence / Débat	Expositions -> Art Contemporain	Concerts -> Classique	Concerts -> Electronique	Expositions -> Beaux-Arts	Expositions -> Histoire / Civilisations	Animations -> Loisirs / Jeux	Animations -> Lecture / Rencontre	Animations -> Stage
75010	1	10ème Ardt	Animations -> Atelier / Cours	Concerts -> Autre concert	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Rock	Spectacles -> Projection	Expositions -> Photographie	Évènements -> Soirée / Bal	Animations -> Conférence / Débat	Concerts -> Musiques du Monde
75020	1	20ème Ardt	Concerts -> Musiques du Monde	Animations -> Atelier / Cours	Concerts -> Jazz	Animations -> Lecture / Rencontre	Concerts -> Autre concert	Évènements -> Soirée / Bal	Concerts -> Rock	Concerts -> Hip-Hop	Spectacles -> Théâtre	Spectacles -> Projection

Most common activities are concerts, animations (workshops and courses), shows and expositions.

The venues are differenced by the type of restaurants included on each cluster. All of the boroughs include French restaurants, bars, pizza places, Italian restaurants and bistros. One will have to study on a major depth each borough to see its specific venues. For example, Boroughs 14 and 18 include a Bakery, Vietnamese restaurant, and a Plaza; Boroughs 11 and 20 have more bars and French restaurants but also include theaters and metro stations; Boroughs 9 and 10 have coffee shops.

Conclusion

To determine which is the best borough is really up to a tourist’s point of view, however this work can give the basic to anyone interested in visiting Paris and finding boroughs with common venues and events.

Paris offers a broad range of venues and events, so picking a hotel based on the surrounding can be very useful.

This kind of study can be updated every now and then since data from the events open data set is updated daily.

Further studies can be made to analyze venues, events and hotels based on the prices and see if there is a relation to find hotels near to free / cheap / expensive events or venues.

