

# Project description

Paris is the capital and most populous city of France. Since the 17th century, Paris has been one of Europe's major centres of finance, diplomacy , commerce, fashion, science and arts. Paris was the second most expensive city in the world.

Since the late 18th century, Paris has been famous for its restaurants , food meticulously prepared and artfully presented. Today, due to Paris' cosmopolitan population, every French regional cuisine and almost every national cuisine in the world can be found there; the city has more than 9,000 restaurants

In this project I will try to explore international restaurants as well as local ones in French Capital.

Some questions:

- 1) Which quartiers in Paris have more restaurants than others ?
- 2) Which quartiers have more specific restaurants than french ones?
- 3) What are the first three famous culinaries in French Capital?

# Data description

List of data sources which will be used in this project:

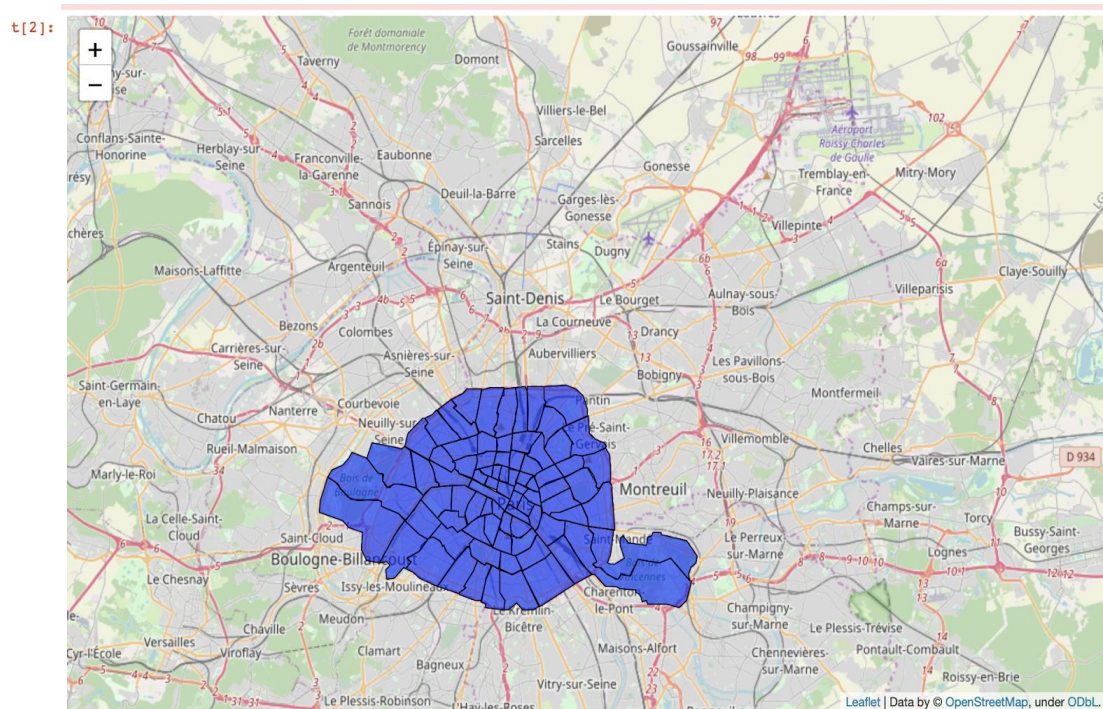
- 1) Foursquare Api - to get restaurants for each location provided
- 2) Paris datasets for quartiers and amortissements :

- <https://opendata.paris.fr/pages/home/>

# Methodology

Description of the steps:

## 1) Loading Paris quartier geodata and displaying it



## 2) Loading both quartier and arrondissements data and merging them:

	Quar_name	Arr_number	Quar_geo	Arr_label	Arr_name	Arr_geo	Latitude	Longitude
0	Rochechouart	9	48.8798119198,2.344861291	9ème Ardt	Opéra	48.8771635173,2.33745754348	48.8798119198	2.344861291
1	Bercy	12	48.8352090499,2.38621008421	12ème Ardt	Reuilly	48.8349743815,2.42132490078	48.8352090499	2.38621008421
2	Halles	1	48.8622891081,2.34489885831	1er Ardt	Louvre	48.8625627018,2.33644336205	48.8622891081	2.34489885831
3	Arsenal	4	48.851585175,2.36476795387	4ème Ardt	Hôtel-de-Ville	48.8543414263,2.35762962032	48.851585175	2.36476795387
4	Jardin-des-Plantes	5	48.8419401934,2.35689388962	5ème Ardt	Panthéon	48.8444431505,2.35071460958	48.8419401934	2.35689388962
5	Porte-Saint-Martin	10	48.8712446509,2.36150364735	10ème Ardt	Entrepôt	48.8761300365,2.36072848785	48.8712446509	2.36150364735
6	Roquette	11	48.8570640408,2.38036406173	11ème Ardt	Popincourt	48.8590592213,2.3800583082	48.8570640408	2.38036406173
7	Picpus	12	48.8303592424,2.42882681508	12ème Ardt	Reuilly	48.8349743815,2.42132490078	48.8303592424	2.42882681508
8	Plaisance	14	48.8303170426,2.31530493157	14ème Ardt	Observatoire	48.8292445005,2.3265420442	48.8303170426	2.31530493157

3) After data cleaning we have to call Foursquare Api :

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue Id	Venue Name	Venue Latitude	Venue Longitude	Venue Category
0	Rochechouart	48.8798119198	2.344861291	597b21fa59c4235cb5929492	Mamiche	48.880112	2.343699	Bakery
1	Rochechouart	48.8798119198	2.344861291	5c6c0fa6c8b2fb002c4e8544	Mikkeller Bar Paris	48.878663	2.345377	Beer Bar
2	Rochechouart	48.8798119198	2.344861291	4e20bc7bb61cdc1ecb61d1d	Pizza di Loretta	48.880634	2.344011	Pizza Place
3	Rochechouart	48.8798119198	2.344861291	56c788dc498e0e3b44270fd1	Aspic	48.879110	2.343958	French Restaurant
4	Rochechouart	48.8798119198	2.344861291	4c9e54a2542b224bf815f39f	Les 36 Corneil	48.878997	2.345501	Wine Bar
5	Rochechouart	48.8798119198	2.344861291	564edb05498e86dce1c17612	Le Potager de Charlotte	48.878924	2.344640	Vegetarian / Vegan Restaurant
6	Rochechouart	48.8798119198	2.344861291	4b7ace10f964a520ad3d2fe3	La Ferme Saint Hubert	48.878908	2.345428	Cheese Shop
7	Rochechouart	48.8798119198	2.344861291	501031cbe4b0b1bc5e7e38e5	Le Barbe à Papa	48.879654	2.347438	French Restaurant
8	Rochechouart	48.8798119198	2.344861291	59143997b9ac385d5323862f	La Palanche D'âulac	48.878265	2.342580	Vegetarian / Vegan Restaurant

4) After retrieving restaurant data we can start to analyze it

## Results

Now we can answer to our questions:

1) These 10 quartiers have more restaurants than others:

```
1 paris_venues.groupby('Neighborhood')['Venue Category'].count().sort_values(ascending=False).head(10)
```

Neighborhood	
Gros-Caillou	50
Batignolles	48
Faubourg-Montmartre	47
Saint-Victor	43
Gaillon	41
Arts-et-Métiers	40
Hôpital-Saint-Louis	40
Ternes	38
Folie-Méricourt	38
Chaillot	37

Name: Venue Category, dtype: int64

2 ) We see that most of the quartiers have french local restaurants dominating, however it is not common for all of them

Gaillon,Palais-Royal,Père-Lachaise - Japanese

Goutte-d'Or,Pont-de-Flandre - Asian

La Chapelle - Chinese

Parc-de-Montsouris - Italian

Saint-Vincent-de-Paul - Indian

```
1 quartier_grouppe.groupby(level = 0).nlargest(1)
```

Neighborhood	Neighborhood	Venue Category	
Amérique	Amérique	French Restaurant	2
Archives	Archives	French Restaurant	10
Arsenal	Arsenal	French Restaurant	12
Arts-et-Métiers	Arts-et-Métiers	French Restaurant	10
Auteuil	Auteuil	French Restaurant	1
Batignolles	Batignolles	French Restaurant	20
Bel-Air	Bel-Air	French Restaurant	1
Belleville	Belleville	French Restaurant	5
Bercy	Bercy	French Restaurant	2
Bonne-Nouvelle	Bonne-Nouvelle	French Restaurant	9
Chaillot	Chaillot	French Restaurant	18
Champs-Élysées	Champs-Élysées	French Restaurant	14
Charonne	Charonne	French Restaurant	2
Chaussée-d'Antin	Chaussée-d'Antin	French Restaurant	9
Clignancourt	Clignancourt	French Restaurant	7
Combat	Combat	French Restaurant	8
Croulebarbe	Croulebarbe	French Restaurant	8
Ecole-Militaire	Ecole-Militaire	French Restaurant	2
Enfants-Rouges	Enfants-Rouges	French Restaurant	7
Epinettes	Epinettes	French Restaurant	2
Europe	Europe	French Restaurant	15
Faubourg-Montmartre	Faubourg-Montmartre	French Restaurant	17
Faubourg-du-Roule	Faubourg-du-Roule	French Restaurant	12
Folie-Méricourt	Folie-Méricourt	French Restaurant	14
Gaillon	Gaillon	Japanese Restaurant	12
Gare	Gare	French Restaurant	3

3) Three most dominating cousins are french(local) , italian and japanese ones:

```
1 paris_venues['Venue Category'].value_counts()
```

French Restaurant	697
Italian Restaurant	193
Japanese Restaurant	129
-	27

# Conclusion

Because we have limitations for prime calls in Foursquare Api , we can not retrieve tips, likes and so on, it can be possible improvement for generating better dataset.