**RATING PARIS RESTAURANTS AND CATERING SERVICES**

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1. ***QUESTION: Instructions***

Now that you have been equipped with the skills and the tools to use location data to explore a geographical

location, over the course of two weeks, you will have the opportunity to be as creative as you want and come up

with an idea to leverage the Foursquare location data to explore or compare neighborhoods or cities of your

choice or to come up with a problem that you can use the Foursquare location data to solve. If you cannot think

of an idea or a problem, here are some ideas to get you started:

In Module 3, we explored New York City and the city of Toronto and segmented and clustered their neighborhoods. Both cities are very diverse and are the financial capitals of their respective countries. One

interesting idea would be to compare the neighborhoods of the two cities and determine how similar or dissimilar

they are. Is New York Ci ty more like Toronto or Paris or some other multicultural city? I will leave it to you to

refine this idea. In a city of your choice, if someone is looking to open a restaurant, where would you recommend

that they open it? Similarly, if a contractor is trying to start their own business, where would you recommend that

they setup their office?

These are just a couple of many ideas and problems that can be solved using location data in addition to other

datasets. No matter what you decide to do, make sure to provide enough justification of why you think what you

want to do or solve is important and why would a client or a group of people be interested in your project.

***1.1 Introduction***

There are many kinds of restaurants and catering services. Whether you are interested in starting a café, a bar,

family-style restaurant or event catering business, you will be part of the food services industry. Popular types of

restaurants and catering businesses include:

1. Gourmet and casual dining

2. Fast-food and food trucks

3. Pubs, bistros and brasseries

4. Coffee shops and cafeterias This will guide and focuses on an individual to restaurants or caterings places for a good meal in Paris France.

***1.2 BACKGROUND***

France is renowned for its cuisine which is the second reason after sightseeing for tourists to visits this city. Paris

food sellers give consumers the opportunity to enjoy their food purchases in a variety of locations. Food selling is

commonly organized into two groups - food retail and foodservice. While food stores tend to sell pre-packaged

food and foodservice outlets tend to be locations where food is served as a meal, these separations are blurring.

Restaurants now sell consumers their favorite sauces and dressings from beside the cash register and retail

stores sell prepared meals from a "hot & fresh" counter. Different rules apply to these different retail activities.

So, when you start a food selling business, it's important to see which rules apply to you. Paris is home to over

12,000 food retailers. This includes:

1. convenience stores

2. farm markets

3. roadside stands

4. grocery stores

5. warehouse clubs

6. drugstores selling food items

7. websites.

Paris, France is home to over 30,000 foodservice outlets.

This includes:

* bakeries
* caterers (including those who run outlets such as employee cafeterias)
* cafés
* foodservice
* vending trucks and chip trucks
* home delivery services

***1.3 REASON***

In a world city like Paris where three million people rub shoulders with one another, it is important to be familiar with social conventions.

***What time?***

In Paris, you can eat out at any time of the day or night … but not everywhere. Every restaurant keeps its own

hours. For popular places, it is best to book and/or get there before 8pm if you want to be sure of getting a seat.

Note that, after 10.30pm, many restaurants close their kitchen! You will always find a restaurant open in the

middle of the night, but you will have less choice. If you prefer to dine early, some restaurants serve food

throughout the day and are therefore open before 7pm.

***Where to sit?***

Even in busy establishments, Parisians always try to find a quiet table. And as soon as there are a few rays of

sunshine, the rule is to opt for a table out on the terrace, even if it is only 13C degrees outdoors. The choice is

*yours! NB Restaurants are non-smoking so outdoor terraces are often full of smokers. Best avoided if you hate cigarette smoke!*

***Are there menus for children?***

Some restaurants have special children’s menus. They are cheaper, serve smaller portions and the dishes are

more adapted to the taste of children.

***1.4 TARGET GROUP***

Visitors to the French capital Paris. We will all need to find a place to eat especially when it will be more convenient.

French Cuisine and restaurants are of master chefs. Paris’ culinary scene is hardly limited to the contents of

Mastering the Art of French Cooking. Paris absolutely excels at an array of foreign cuisines, too. For mind-blowingly good Asian food, head to one of the many restaurants on rue de Belleville. For Middle Eastern cuisine, L’as du Falafel is where it’s at. And for pizza? Look no further than Coinstot Vino, Louie Louie, or Tripletta.

When it comes to food, the French know what they’re doing. Steak frites, fromage, foie gras, crepes, croissants why not try them in their origin country.

A few words of advice: look past the touristy neighborhoods when searching for something great to eat (we recommend venturing into the city’s ‘more local’ neighborhoods,

such as the 13th, 14th, 10th, and 20th arrondissements).

1. ***Data***

This is a public data from the foursquare API.

API location data is used to access all restaurants and catering places/shops in Paris, France.

***2.1 Methodology***

We will want to explore all restaurants/catering services in Paris. The data with information of restaurants/catering services will come from Foursquare API with "Likes", "response", and "count" in relation to venues and categories.

Explore and Understand Data plot a figure to understand how many restaurants/catering services in the area. Also, we will examine the categories for counts, response, and likes for all. Then, we can make recommendations to intended visitors to this area.

1. ***exploratory data analysis***

The geographical coordinate of Paris is 48.8566101, 2.3514992.

***3.1 Data extraction***

Finding the actual data from the Foursquare API.

Then filtering data into categories for each row.

***3.11 The raw data***

*Here data show some of the tourist sites with id’s, categories, latitude, and longitude in Paris*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **name** | **id** | **categories** | **lat** | **lng** |
| **0** | Place de l'Hôtel de Ville – Esplanade de la Li... | 4bf41231e5eba59334341f90 | Plaza | 48.856925 | 2.351412 |
| **1** | Parc Rives de Seine | 58e0f18f561ded7abcbbbd01 | Park | 48.855510 | 2.351419 |
| **2** | Berges de Seine – Rive droite | 58d800df9435a979b8a645fa | Pedestrian Plaza | 48.855131 | 2.352289 |
| **3** | L'Alsacien | 54351b59498e123ee4afc7ff | Alsatian Restaurant | 48.858275 | 2.350381 |
| **4** | BHV Marais | 4b4b6a3df964a520b89a26e3 | Department Store | 48.857312 | 2.353633 |
| **5** | Paris Rendez-Vous | 5361075a498ea34171cb06ca | Souvenir Shop | 48.856951 | 2.352914 |
| **6** | Maison Aleph | 59247f4e0d2be70573edd834 | Pastry Shop | 48.857348 | 2.354873 |
| **7** | Square de la Tour Saint- Jacques | 4dbd336b6a23e294ba405cfa | Park | 48.857882 | 2.348757 |
| **8** | Häagen-Dazs | 4cb2fc20db32f04d6da9d34d | Ice Cream Shop | 48.854879 | 2.350233 |
| **9** | Tour Saint-Jacques | 4b5c7d1ff964a5205f3229e3 | Historic Site | 48.858031 | 2.348875 |
| **10** | LUSH | 4d628e33e4fe548152b8979e | Cosmetics Shop | 48.857791 | 2.351622 |
| **11** | Galerie Azzedine Alaïa | 4c0bc2fdbbc676b018f64bd5 | Art Gallery | 48.857545 | 2.355217 |
| **12** | Fleux' | 4b533b45f964a520509327e3 | Furniture / Home Store | 48.858763 | 2.354161 |
| **13** | Yummy and Guiltfree | 5901dcce5d891b426af3e948 | Gluten-free Restaurant | 48.857516 | 2.352605 |
| **14** | Hotel Duo Paris | 4e84bdeb2fb6611bdfd704ea | Hotel | 48.858065 | 2.352937 |
| **15** | Théâtre de la Ville | 4adcda15f964a520a13721e3 | Theater | 48.857239 | 2.347911 |
| **16** | BHV Marais – L'Homme | 4be150de0365c9b6bc4cb338 | Men's Store | 48.857752 | 2.353908 |
| **17** | Le Perchoir du Marais | 53aaac02498e602fdceec750 | Cocktail Bar | 48.857189 | 2.353642 |
| **18** | Bagel Baget Cafe | 53d13101498e918e659f88a2 | Bagel Shop | 48.858794 | 2.350769 |
| **19** | Yogurt Factory | 4ff07da4e4b0b61f2a827eb3 | Frozen Yogurt Shop | 48.859083 | 2.353587 |
| **20** | Au Vieux Paris d'Arcole | 4b9ea5cdf964a52094f636e3 | French Restaurant | 48.854196 | 2.350312 |
| **21** | Lucky Records | 4e4bfa79a8097d9c84c2b06d | Record Shop | 48.858556 | 2.351442 |
| **22** | Galerie Art Génération | 4b7e7eabf964a52079ef2fe3 | Art Gallery | 48.858333 | 2.352194 |
| **23** | Au Bougnat | 4c61c047eb82d13afac003d6 | Auvergne Restaurant | 48.854302 | 2.350065 |
| **24** | Les Mauvais Garçons | 4bc9d039937ca5937f57a692 | Lyonese Bouchon | 48.856829 | 2.355084 |
| **25** | Les Souffleurs | 4b72fb3ff964a520ba932de3 | Gay Bar | 48.857070 | 2.355101 |
| **26** | Sephora Flash | 5624f608498e8ec2bac61cce | Perfume Shop | 48.857499 | 2.352096 |

There are about 99 places in the data frame

***3.1.2 THE LIST OF UNIQUE CATEGORIES FROM THE API***

array (['Plaza', 'Park', 'Pedestrian Plaza', 'Alsatian Restaurant',

'Department Store', 'Souvenir Shop', 'Pastry Shop',

'Ice Cream Shop', 'Historic Site', 'Cosmetics Shop', 'Art Gallery',

'Furniture / Home Store', 'Gluten-free Restaurant', 'Hotel',

'Theater', "Men's Store", 'Cocktail Bar', 'Bagel Shop',

'Frozen Yogurt Shop', 'French Restaurant', 'Record Shop',

'Auvergne Restaurant', 'Lyonese Bouchon', 'Gay Bar',

'Perfume Shop', 'Fountain', 'Coffee Shop', 'Gastropub',

'Flower Shop', 'Clothing Store', 'Dessert Shop', 'Café', 'Bakery',

"Women's Store", 'Portuguese Restaurant', 'Church', 'Tea Room',

'Seafood Restaurant', 'Jazz Club', 'Restaurant', 'Wine Bar', 'Pub',

'Lingerie Store', 'Miscellaneous Shop', 'Chinese Restaurant',

'Bookstore', 'Cupcake Shop', 'Scenic Lookout',

'Indie Movie Theater', 'Bistro', 'Pet Store',

'Arts & Crafts Store', 'Chocolate Shop', 'Art Museum', 'Creperie',

'Italian Restaurant', 'Memorial Site', 'Tapas Restaurant', 'Bar',

'Burger Joint'].

Note: the above is an array unique places in Paris.

***3.1.3 RATING OF LIKES***

Array of likes:

[593, 12, 46, 1115, 15, 21, 38, 278, 26, 375, 18, 31, 76, 195, 147, 46, 64, 6

2, 9, 47, 36, 66, 8, 25, 109, 123, 35, 108, 136, 65, 179, 244, 191, 39, 74, 1

0, 505, 5, 36, 19, 8581, 11, 120, 119, 210, 52, 160, 108, 109, 55, 83, 22, 12

4, 100, 19, 33, 22, 128, 19, 14, 228, 15, 43, 89, 13, 10, 453, 6, 16, 62, 536

0, 88, 23, 38, 33, 53, 20, 31, 139, 70, 485, 7, 8, 487, 17, 92]

1. **Exploratory Analysis**

***4.1 STATISTICS***

These are the statistics of the likes

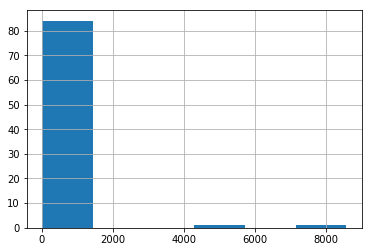
Maximum is 8581

Minimum is 5

Median is 54

Mean is 269.79 = 270 since there is no fraction of likes.

***4.2 VISUALIZE HISTOGRAM***



Most of the likes are around 0 – 1500.

Also, the histogram is not normally distributed.

* 1. ***THE PERCENTAGE OF THE LIKES***

The 25th percental likes is 21.25, the 50th percental is 54.0 and the 75th percental is 23.75.

The 50th percental sometimes is the same as the Mean.

* 1. ***LIKES CATEGORY (K-clusters)***

categorizing the likes in the form of less than 24, 24-45, 45-76, 76> as: less than 24 poor, 24-45 below average, 45-76 above average and 76 greats.

* + 1. ***k-clusters***

array ([2, 1, 3, 2, 1, 1, 0, 2, 0, 2, 1, 0, 3, 2, 2])

* + 1. **category table (k-cluster)**

head (14) of the k-clusters table

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Name** | **american food food** | **bars** | **italian food food** | **other** | **above average avg** | **below average avg** | **great** | **poor** |
| **0** | Place de l'Hôtel de Ville – Esplanade de la Li... | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **2** | erges de Seine – Rive droite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **3** | L'Alsacien | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **4** | BHV Marais | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **5** | Paris Rendez-Vous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **6** | Maison Aleph | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **8** | Häagen-Dazs | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| **9** | Tour Saint-Jacques | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **11** | Galerie Azzedine Alaïa | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| **12** | Fleux' | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **13** | Yummy and Guiltfree | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **14** | Hotel Duo Paris | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

* 1. ***CLUSTER = 0 TABLE***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **name** | **id** | **categories** | **lat** | **lng** | **total likes** | **total likes\_cat** | **categories\_new** | **label** |
| **8** | **Häagen-Dazs** | **4cb2fc20db32f04d6da9d34d** | **Ice Cream Shop** | **48.854879** | **2.350233** | **38** | **below avg** | **other** | **0** |
| **11** | **Galerie Azzedine Alaïa** | **4c0bc2fdbbc676b018f64bd5** | **Art Gallery** | **48.857545** | **2.355217** | **26** | **below avg** | **None** | **0** |
| **14** | **Hotel Duo Paris** | **4e84bdeb2fb6611bdfd704ea** | **Hotel** | **48.858065** | **2.352937** | **31** | **below avg** | **None** | **0** |
| **24** | **Les Mauvais Garçons** | **4bc9d039937ca5937f57a692** | **Lyonese Bouchon** | **48.856829** | **2.355084** | **36** | **below avg** | **None** | **0** |
| **27** | **Bel Canto** | **4adcda12f964a520513621e3** | **French Restaurant** | **48.854632** | **2.354493** | **25** | **below avg** | **None** | **0** |
| **30** | **Au Verre Luisant** | **4b6c67bef964a52059372ce3** | **Gastropub** | **48.858512** | **2.351637** | **35** | **below avg** | **None** | **0** |
| **39** | **Galerie Sakura** | **536e2e04498e18340911a3c7** | **Art Gallery** | **48.857264** | **2.356032** | **39** | **below avg** | **None** | **0** |
| **44** | **Grizzli Café** | **4b0c29bff964a520203823e3** | **French Restaurant** | **48.858598** | **2.35** | **36** | **below avg** | **None** | **0** |
| **63** | **Nature & Découvertes** | **5655b34d498e3696027cc6e8** | **Miscellaneous Shop** | **48.858249** | **2.356163** | **33** | **below avg** | **None** | **0** |
| **73** | **Le Mistral** | **4bea9cef62c0c928fbfee0d4** | **French Restaurant** | **48.857134** | **2.347638** | **43** | **below avg** | **None** | **0** |
| **87** | **Pozzetto** | **5264a08c11d2134d3e546b2c** | **Italian Restaurant** | **48.856774** | **2.356964** | **38** | **below avg** | **italian food** | **0** |
| **88** | **Place Igor Stravinsky** | **4e84316de5fab91d1ab4de68** | **Plaza** | **48.859754** | **2.351608** | **33** | **below avg** | **None** | **0** |
| **91** | **Sergeant Paper** | **4d79108e0ddba35dfac24a76** | **Art Gallery** | **48.860665** | **2.350435** | **31** | **below avg** | **None** | **0** |

The first cluster label 0 is the below average. That is these group has ratings ranging from 24-45.

* 1. ***CLUSTER = 1 TABLE***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **name** | **id** | **categories** | **lat** | **lng** | **total likes** | **total likes\_cat** | **categories\_new** | **label** |
| **2** | Berges de Seine – Rive droite | 58d800df9435a979b8a645fa | Pedestrian Plaza | 48.855131 | 2.352289 | 12 | poor | None | 1 |
| **5** | Paris Rendez-Vous | 5361075a498ea34171cb06ca | Souvenir Shop | 48.856951 | 2.352914 | 15 | poor | None | 1 |
| **6** | Maison Aleph | 59247f4e0d2be70573edd834 | Pastry Shop | 48.857348 | 2.354873 | 21 | poor | None | 1 |
| **13** | Yummy and Guiltfree | 5901dcce5d891b426af3e948 | Gluten-free Restaurant | 48.857516 | 2.352605 | 18 | poor | None | 1 |
| **22** | Galerie Art Génération | 4b7e7eabf964a52079ef2fe3 | Art Gallery | 48.858333 | 2.352194 | 9 | poor | None | 1 |
| **26** | Sephora Flash | 5624f608498e8ec2bac61cce | Perfume Shop | 48.857499 | 2.352096 | 8 | poor | None | 1 |
| **41** | La Glacerie | 5b2e4d6df79faa002cccc2a5 | Ice Cream Shop | 48.858266 | 2.353173 | 10 | poor | other | 1 |
| **43** | Amorino | 5b81a899249623002cbde2b3 | Ice Cream Shop | 48.85411 | 2.349764 | 5 | poor | other | 1 |
| **47** | Tasca | 5325cbc8498e56006d2a8a77 | Portuguese Restaurant | 48.856686 | 2.356374 | 19 | poor | None | 1 |
| **49** | Galerie 88 | 4adcda04f964a520403221e3 | Tea Room | 48.85493 | 2.35365 | 11 | poor | other | 1 |
| **59** | Lot Of Wine | 510d12a8e4b03bf82f0cf202 | Wine Bar | 48.854299 | 2.355268 | 22 | poor | None | 1 |
| **62** | Les Dessous d'Apollon | 4c499f609e3e2d7f26800449 | Lingerie Store | 48.857477 | 2.355545 | 19 | poor | None | 1 |
| **64** | Archive 18-20 | 563635e4498efa9960dc2ee7 | Furniture / Home Store | 48.857794 | 2.355162 | 22 | poor | None | 1 |
| **66** | Le Céleste Gourmand | 4bae719df964a5202cb33be3 | Chinese Restaurant | 48.857566 | 2.350047 | 19 | poor | None | 1 |
| **69** | She's Cake | 562ba4a4498e640cb2b15e14 | Cupcake Shop | 48.856791 | 2.356526 | 14 | poor | None | 1 |
| **72** | Place Baudoyer | 4adcda0ef964a5203c3521e3 | Plaza | 48.856264 | 2.355422 | 15 | poor | None | 1 |
| **76** | Luminor Hôtel de Ville | 547b457b498e8d78ee354feb | Indie Movie Theater | 48.858654 | 2.353498 | 13 | poor | None | 1 |
| **78** | Les Foodies | 57726d6a498e0bc923087c7d | Bistro | 48.858308 | 2.354662 | 10 | poor | None | 1 |
| **81** | Melodies graphiques | 4e413b1f2271a89dd08ad91e | Arts & Crafts Store | 48.855054 | 2.355579 | 6 | poor | None | 1 |
| **82** | Edwart Chocolatier | 543aa57b498e6f51e6bfff25 | Chocolate Shop | 48.856846 | 2.356593 | 16 | poor | None | 1 |
| **86** | Crêperie Beaubourg | 581cec3e4ed61041c1816763 | Creperie | 48.859348 | 2.351439 | 23 | poor | None | 1 |
| **90** | Hôtel Caron de Beaumarchais | 4adcd9fff964a520993021e3 | Hotel | 48.856448 | 2.356729 | 20 | poor | None | 1 |
| **95** | Meating Corner | 5a1ea646b9ac382318bd8654 | Burger Joint | 48.859205 | 2.349764 | 7 | poor | american food | 1 |
| **96** | L'Horloge du Palais de la Cité | 519a24a8498e55ea1824b30a | Historic Site | 48.856139 | 2.346155 | 8 | poor | None | 1 |
| **98** | Les Agités | 4f1086d0e4b0aabf16bdfc5c | Bar | 48.860007 | 2.349531 | 17 | poor | bars | 1 |

The second cluster label 1 is the poor group. That is these group has ratings less than24.

* 1. ***CLUSTER = 2 TABLE***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **name** | **id** | **categories** | **lat** | **lng** | **total likes** | **total likes\_cat** | **categories\_new** | **label** |
| **0** | Place de l'Hôtel de Ville – Esplanade de la Li... | 4bf41231e5eba59334341f90 | Plaza | 48.856925 | 2.351412 | 593 | great | None | 2 |
| **4** | BHV Marais | 4b4b6a3df964a520b89a26e3 | Department Store | 48.857312 | 2.353633 | 1115 | great | None | 2 |
| **9** | Tour Saint-Jacques | 4b5c7d1ff964a5205f3229e3 | Historic Site | 48.858031 | 2.348875 | 278 | great | None | 2 |
| **12** | Fleux' | 4b533b45f964a520509327e3 | Furniture / Home Store | 48.858763 | 2.354161 | 375 | great | None | 2 |
| **16** | BHV Marais – L'Homme | 4be150de0365c9b6bc4cb338 | Men's Store | 48.857752 | 2.353908 | 195 | great | None | 2 |
| **17** | Le Perchoir du Marais | 53aaac02498e602fdceec750 | Cocktail Bar | 48.857189 | 2.353642 | 147 | great | bars | 2 |
| **28** | Fontaine Stravinsky | 4cca7e73c4d06dcbb72d6303 | Fountain | 48.859578 | 2.351555 | 109 | great | None | 2 |
| **29** | Le Peloton Café | 5618ca93498e8d9df7d0b582 | Coffee Shop | 48.855505 | 2.356034 | 123 | great | other | 2 |
| **31** | Le Cox | 4b23dd27f964a5207c5b24e3 | Gay Bar | 48.858148 | 2.354887 | 108 | great | None | 2 |
| **33** | Marché aux fleurs Reine Elizabeth II | 4bc836e514d7952121a868e9 | Flower Shop | 48.855326 | 2.347407 | 136 | great | None | 2 |
| **36** | Pozzetto | 4bc9bde0b6c49c74fada8e91 | Ice Cream Shop | 48.856827 | 2.356269 | 179 | great | other | 2 |
| **37** | Place du Châtelet | 4b7d977ef964a5209fc82fe3 | Plaza | 48.857714 | 2.347504 | 244 | great | None | 2 |
| **38** | Comme à Lisbonne | 4e0757e96284d9ee92d4b1ca | Café | 48.856767 | 2.356462 | 191 | great | None | 2 |
| **42** | Benedict | 5293ae7d11d2fba382d9f652 | French Restaurant | 48.858208 | 2.356081 | 505 | great | None | 2 |
| **48** | Cathédrale Notre-Dame de Paris | 4adcda09f964a520e83321e3 | Church | 48.853124 | 2.349561 | 8581 | great | None | 2 |
| **50** | Who's | 4e6bb58cd4c01ce0181d014f | Cocktail Bar | 48.85949 | 2.352669 | 120 | great | bars | 2 |
| **51** | Les Pinces | 5471c7d5498e7ddb1b9178ff | Seafood Restaurant | 48.857552 | 2.356318 | 119 | great | italian food | 2 |
| **52** | Mariage Frères | 4adcda04f964a520373221e3 | Tea Room | 48.857769 | 2.356618 | 210 | great | other | 2 |
| **54** | Pierre Hermé | 51dbf0ce498e1372cbaf23ed | Pastry Shop | 48.858127 | 2.356442 | 160 | great | None | 2 |
| **55** | Duc des Lombards | 4adcda08f964a520ab3321e3 | Jazz Club | 48.859617 | 2.348627 | 108 | great | None | 2 |
| **56** | Une Glace à Paris | 557f15bb498ea14854ab0f79 | Ice Cream Shop | 48.858162 | 2.356351 | 109 | great | other | 2 |
| **58** | L'Ébouillanté | 4b6eab67f964a52002c62ce3 | French Restaurant | 48.854861 | 2.355162 | 83 | great | None | 2 |
| **60** | Lizard Lounge | 4adcda05f964a520603221e3 | Pub | 48.857367 | 2.35616 | 124 | great | bars | 2 |
| **61** | Pamela Popo | 4db07d97fa8ca4b3e9e2caca | French Restaurant | 48.855749 | 2.356919 | 100 | great | None | 2 |
| **65** | Comptoir Gourmet | 512534ece4b03a94f9a50313 | Restaurant | 48.859958 | 2.354374 | 128 | great | american food | 2 |
| **71** | Théâtre du Châtelet | 4b8ebd9df964a5203c3433e3 | Theater | 48.857775 | 2.346265 | 228 | great | None | 2 |
| **75** | Tours de la Cathédrale Notre-Dame de Paris | 4e96e6a7f79068de88dd5eaf | Scenic Lookout | 48.85323 | 2.349207 | 89 | great | None | 2 |
| **79** | La Caféothèque de Paris | 4bbb21a91261d13aa847eb98 | Coffee Shop | 48.854197 | 2.355714 | 453 | great | other | 2 |
| **84** | Centre Pompidou – Musée National d'Art Moderne | 4adcda0af964a520623421e3 | Art Museum | 48.86073 | 2.35166 | 5360 | great | None | 2 |
| **85** | Black Dog | 4b7d9398f964a520bcc72fe3 | Pub | 48.859408 | 2.349143 | 88 | great | bars | 2 |
| **92** | Les Piétons | 4bc9dd020687ef3b719cdacc | Tapas Restaurant | 48.85912 | 2.349917 | 139 | great | None | 2 |
| **94** | Le Dernier Bar avant la Fin du Monde | 4fd21c85e4b08315f264bdd5 | Bar | 48.857971 | 2.346152 | 485 | great | bars | 2 |
| **97** | Le Saint-Régis | 4b1411c6f964a520c09c23e3 | Bistro | 48.85293 | 2.353724 | 487 | great | None | 2 |
| **99** | L'Imprévu Café | 4bb5f0beef159c74bc3075f7 | Bar | 48.859468 | 2.349593 | 92 | great | bars | 2 |

The third cluster label 2 is the great group. That is these group has ratings 75 and above.

* 1. ***CLUSTER = 3 TABLE***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **name** | **id** | **categories** | **lat** | **lng** | **total likes** | **total likes\_cat** | **categories\_new** | **label** |
| **3** | L'Alsacien | 54351b59498e123ee4afc7ff | Alsatian Restaurant | 48.858275 | 2.350381 | 46 | avg avg | None | 3 |
| **15** | Théâtre de la Ville | 4adcda15f964a520a13721e3 | Theater | 48.857239 | 2.347911 | 76 | avg avg | None | 3 |
| **18** | Bagel Baget Cafe | 53d13101498e918e659f88a2 | Bagel Shop | 48.858794 | 2.350769 | 46 | avg avg | other | 3 |
| **19** | Yogurt Factory | 4ff07da4e4b0b61f2a827eb3 | Frozen Yogurt Shop | 48.859083 | 2.353587 | 64 | avg avg | None | 3 |
| **20** | Au Vieux Paris d'Arcole | 4b9ea5cdf964a52094f636e3 | French Restaurant | 48.854196 | 2.350312 | 62 | avg avg | None | 3 |
| **23** | Au Bougnat | 4c61c047eb82d13afac003d6 | Auvergne Restaurant | 48.854302 | 2.350065 | 47 | avg avg | None | 3 |
| **25** | Les Souffleurs | 4b72fb3ff964a520ba932de3 | Gay Bar | 48.85707 | 2.355101 | 66 | avg avg | None | 3 |
| **34** | Kilo Shop | 4fa57583e4b00f71952b8dba | Clothing Store | 48.858151 | 2.352096 | 65 | avg avg | None | 3 |
| **40** | Benoit Paris | 4bd6e79c6798ef3b31ca658d | French Restaurant | 48.858428 | 2.350068 | 74 | avg avg | None | 3 |
| **53** | Résistance | 555fa507498efe354e7b7f53 | Cocktail Bar | 48.858042 | 2.356651 | 52 | avg avg | bars | 3 |
| **57** | Grand Cœur | 556990cc498e61c8e37e69ce | Restaurant | 48.859737 | 2.353591 | 55 | avg avg | american food | 3 |
| **83** | Boutique du Centre Pompidou | 5113ebbce4b0d3c1022aef14 | Souvenir Shop | 48.860706 | 2.352362 | 62 | avg avg | None | 3 |
| **89** | Mémorial de la Shoah | 4ae4549cf964a520039a21e3 | Memorial Site | 48.854826 | 2.356254 | 53 | avg avg | None | 3 |
| **93** | Au Vieux Comptoir | 4b27effef964a5209a8c24e3 | French Restaurant | 48.858893 | 2.346129 | 70 | avg avg | None | 3 |

The fourth cluster label 3 is the above average. That is these group has ratings ranging from 45-75.

***5 CONCLUSION***[**¶**](http://localhost:8888/nbconvert/html/Battle%20of%20the%20Neighbours%20Paris%209-12-19-Copy1.ipynb?download=false#Conclusion)

Label 0 are the below average like places, label 3 are above average like places, label 2 are great places, and the poor like places is label 1.

From the third cluster. This represents the venues as great group with most like. Cathedrale Notre-dame de Paris has the most likes of 8581, followed by Centre Pompidou-Musee National d'Art Moderne with 5360 like, and then by BHV Merais with 1115 likes.

Also, second cluster representing the poor venus with the least likes, Creperie Beaubourg has the most of 23 likes, Archive and Lot of Wine with 22 likes each while Amorino has the leat likes of 5.

Below aerage group is First cluster. The venue with the most likes is Le Mistral with 43 likes then Galerie Sakura with 39 likes and Haagen-Dazs and Pozzetto with 38 likes each.

Finnaly the fourth cluster is the above average group. Theatre de la Ville has 76 likes, Benoit Paris with 74 like while Au Vieux Comptoir with 70 likes representing the top 3 Venues with most likes in the group.