French Restaurant Opportunity in Paris

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Background and Hypothesis

- Migration to France has grown exponentially, more specifically, to Paris.

- The city has turned into a multicultural city.

- International restaurants have grown significantly to meet the demand of immigrants.

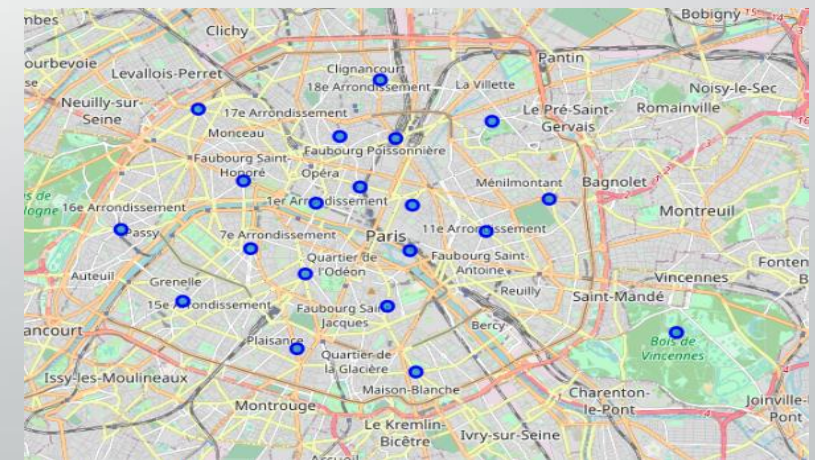- Is there a lack of French restaurants in any neighborhood in Paris today?

Data Gathering and Cleaning

- Foursquare Data: Information on the variety of venues in each of the 20 neighborhoods or "arrondissements" in Paris, France.

- Paris Data: Excel spreadsheet with information on latitude, longitude, French population, non-French population, ages, gender, etc.

Methodology

	Postal Code	Latitude	Longitude	Population	Area	Males	Females	0-9 years
count	20.00000	20.000000	20.000000	20.000000	20.000000	20.000000	20.000000	20.000000
mean	75010.50000	48.859640	2.344130	109376.300000	4.346350	51445.100000	57931.200000	10253.850000
std	5.91608	0.018505	0.038008	72056.491126	2.374044	33570.771118	38566.606146	7351.641709
min	75001.00000	48.826200	2.274900	16266.000000	0.992000	8369.000000	7897.000000	1225.000000
25%	75005.75000	48.846775	2.322250	40027.000000	2.172750	18077.750000	21949.250000	3402.250000
50%	75010.50000	48.860850	2.346800	113168.000000	3.984500	53622.000000	59546.000000	10569.000000
75%	75015.25000	48.871375	2.359300	170990.750000	6.098000	79430.500000	92240.500000	16520.000000
max	75020.00000	48.891600	2.435100	233392.000000	8.502000	105507.000000	127885.000000	21677.000000

- Data Cleaning and Descriptive Statistics:

- Paris neighborhood mapping:

Methodology

- Foursquare Data:

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Louvre	48.864	2.3311	Grand Bassin Rond	48.862880	2.329295	Fountain
1	Louvre	48.864	2.3311	Balagan	48.865432	2.329680	Israeli Restaurant
2	Louvre	48.864	2.3311	Musée des Arts Décoratifs	48.863077	2.333393	Art Museum
3	Louvre	48.864	2.3311	Place des Pyramides	48.863924	2.332224	Plaza
4	Louvre	48.864	2.3311	Kosyuen 葉修園	48.864163	2.333567	Tea Room

- Venues by Neighborhood:
  - Reuilly has the lowest number of venues in its neighborhood – only 8.

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Reuilly	8	8	8	8	8	8
Batignolles-Monceau	35	35	35	35	35	35
Buttes-Chaumont	35	35	35	35	35	35
Observatoire	40	40	40	40	40	40
Vaugirard	46	46	46	46	46	46
Menilmontant	59	59	59	59	59	59
Palais-Bourbon	59	59	59	59	59	59
Luxembourg	61	61	61	61	61	61
Butte-Montmartre	69	69	69	69	69	69
Passy	71	71	71	71	71	71
Pantheon	75	75	75	75	75	75
Opera	79	79	79	79	79	79
Enclos-St-Laurent	83	83	83	83	83	83
Popincourt	85	85	85	85	85	85
Elysee	89	89	89	89	89	89
Temple	98	98	98	98	98	98
Gobelins	100	100	100	100	100	100
Hotel-de-Ville	100	100	100	100	100	100
Louvre	100	100	100	100	100	100
Bourse	100	100	100	100	100	100

Methodology

- French to non-French Population Ratio:
  - Reuilly has the highest ratio across all neighborhoods (~90% of French people), meaning there may be a high unsatisfied demand in this area.

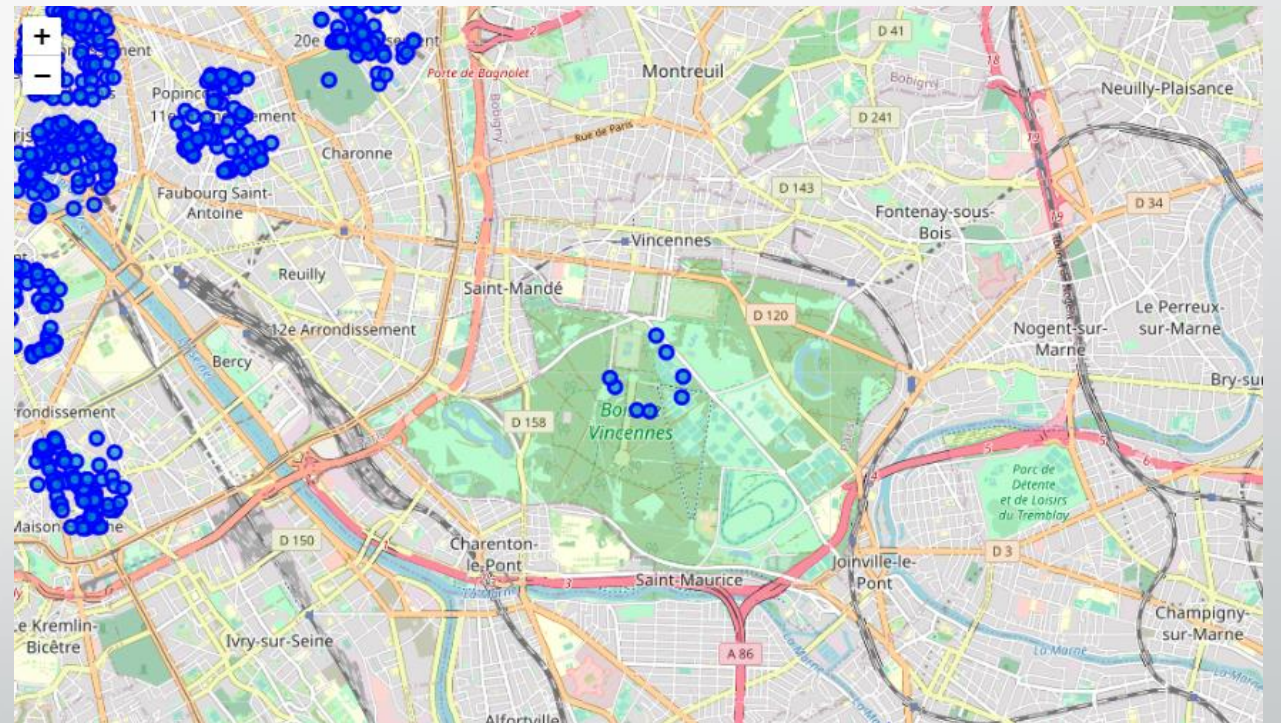|	Neighborhood	% French Population
11	Reuilly	0.890339
5	Luxembourg	0.879100
8	Opera	0.878012
4	Pantheon	0.877570
14	Vaugirard	0.868415
16	Batignolles-Monceau	0.868156
7	Elysee	0.867692
12	Gobelins	0.865408
10	Popincourt	0.861337
0	Louvre	0.859523
13	Observatoire	0.858124
3	Hotel-de-Ville	0.854244
1	Bourse	0.852919
19	Menilmontant	0.852436
2	Temple	0.845552
6	Palais-Bourbon	0.844550
15	Passy	0.843635
9	Enclos-St-Laurent	0.840935
17	Butte-Montmartre	0.828134
18	Buttes-Chaumont	0.827939

Methodology

- Population by neighborhood:
  - Reuilly is ranked 9th in terms of population (140,296). It is highly above (~30%) the average population of Paris neighborhoods (109,376).

	Neighborhood	Population
14	Vaugirard	233392
19	Menilmontant	195814
17	Butte-Montmartre	195233
18	Buttes-Chaumont	187015
12	Gobelins	182099
16	Batignolles-Monceau	167288
15	Passy	166361
10	Popincourt	146643
11	Reuilly	140296
13	Observatoire	135964
9	Enclos-St-Laurent	90372
8	Opera	59555
4	Pantheon	58850
6	Palais-Bourbon	51367
5	Luxembourg	41100
7	Elysee	36808
2	Temple	34115
3	Hotel-de-Ville	28088
1	Bourse	20900
0	Louvre	16266

Methodology

- Reuilly in a map:
  - Reuilly is a neighborhood that is slightly away from the heart of Paris.

Results

- Reuilly is shown as the neighborhood with the least venues across all neighborhoods in Paris.

- Reuilly is the only out of the 20 neighborhoods that doesn't have French Restaurant as a top 10 venue.

- Reuilly ranked first among all 20 neighborhoods in terms of French population meaning there is unsatisfied demand in this area.

- Reuilly was ranked 9th in terms of population (140,296), significantly above (~30%) the average population of a neighborhood in Paris (109,376).