

Report- The Battle of Neighborhoods

20 June 2020

Author: SATYANARAYAN PANDA

Introduction:

The Task

To investigate town of Paris for a chief retail location to help a retailer with information required to open a store wherever traffic is right. Retailor is trying to find significant and constant traffic removed from extremely high finish retailers to match the business model. they need asked for analysis concerning location information for hotspots within the town wherever the foremost traffic is to satisfy the demand necessities for a place of business.

Outcome

The goal is to spot the simplest districts to open new stores as a part of the company's arrange. The results are going to be translated to management in an exceedingly straightforward type which will convey the data-driven analysis for the simplest locations to open retail stores. this can be all over by showing visual graph.

	CAR	NAME	NSQAR	CAR.1	CARINSEE	LAR	NSQCO	SURFACE	PERIMETRE	Geometry_X	Geome
3	3	Temple	750000003	3	3	3eme Ardt	750001537	1170882828	4519264	48.862872	2.36000
1	19	Buttes-Chaumont	750000019	19	19	19eme Ardt	750001537	6792651129	11253182	48.887076	2.38482
2	14	Observatoire	750000014	14	14	14eme Ardt	750001537	5614877309	10317483	48.829245	2.32654
3	10	Entrepot	750000010	10	10	10eme Ardt	750001537	2891739442	6739375	48.876130	2.36072
4	12	Reuilly	750000012	12	12	12eme Ardt	750001537	16314782637	24089666	48.834974	2.42132
5	16	Passy	750000016	16	16	16eme Ardt	750001537	16372542129	17416110	48.860392	2.26197
3	11	Popincourt	750000011	11	11	11eme Ardt	750001537	3665441552	8282012	48.859059	2.38005
7	2	Bourse	750000002	2	2	2eme Ardt	750001537	991153745	4554104	48.868279	2.34280
3	4	Hotel-de-Ville	750000004	4	4	4eme Ardt	750001537	1600585632	5420908	48.854341	2.35763
9	17	Batignolles-Monceau	750000017	17	17	17eme Ardt	750001537	5668834504	10775580	48.887327	2.30677
10	18	Buttes-Montmartre	750000018	18	18	18eme Ardt	750001537	5996051308	9916464	48.892569	2.34816
11	1	Louvre	750000001	1	1	1er Ardt	750001537	1824612860	6054937	48.862563	2.33644
12	5	Pantheon	750000005	5	5	5eme Ardt	750001537	2539374623	6239195	48.844443	2.35071

Paris, the City of Lights, is pushing to become a city without so many car lights. Since taking office in 2014, Socialist Mayor Anne Hidalgo has pushed to remove more vehicles, especially gas-powered ones, from the boulevards of Paris, one of Europe's most congested and smog-laden cities.

Last week her administration won an important long-running legal battle when a city administrative court approved her decision to pedestrianize almost 2 miles of the Seine Quays.

This legal victory comes as French lawmakers are taking a look at the draft of a major transit bill that would allow French cities of more than 100,000 inhabitants to charge drivers a fee for entering urban cores. The bill is scheduled to be voted on next spring.

Data

1. Foursquare location data will be leveraged to complete this assignment through consuming the API service available on the website.

2. Population data will be leveraged from the official source <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/comprehensive.cfm> to determine areas with lower population density which might not be suitable for opening Indian restaurants.

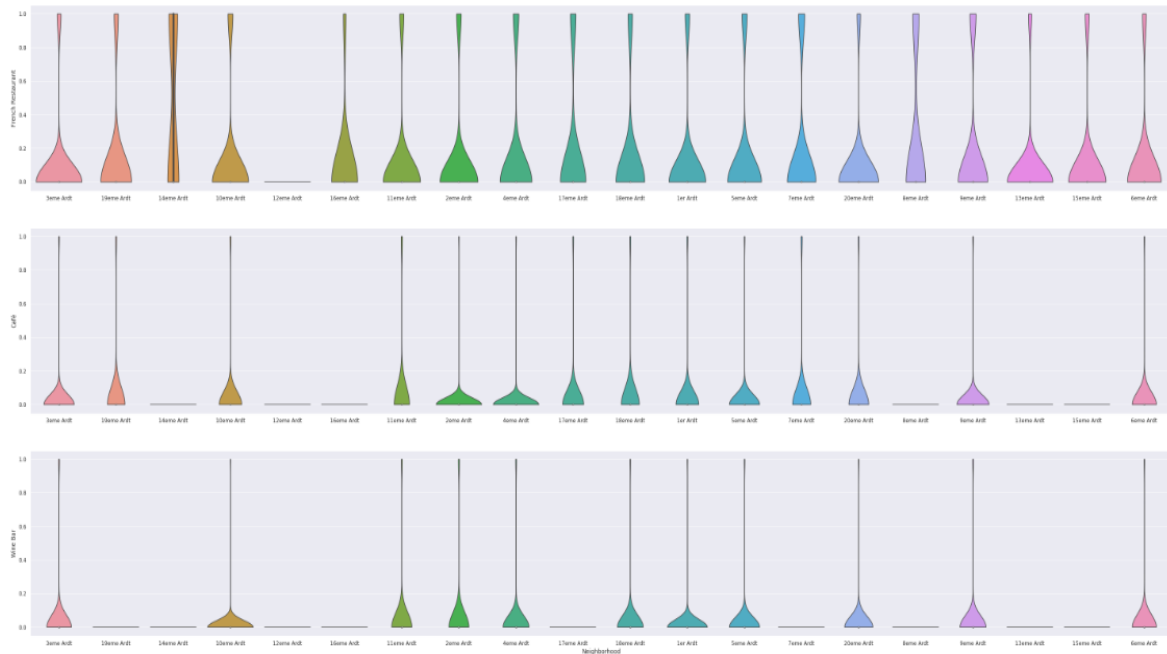
3. The API call will be made with below Python sample code:

```
import json, requests
url = 'https://api.foursquare.com/v2/venues/explore'
params = dict (
    client_id='CLIENT_ID',
    client_secret='CLIENT_SECRET',
    v='20180323', ll=' 407243740018 ',
    query='coffee'
)
limit=1
resp = requests.get(url%url, params=params)
data = json.loads(resp.text)
```

	Arrondissement_Num	Neighborhood	French_Name	Latitude	Longitude
0	3	Temple	3eme Ardt	48.862872	2.360001
1	19	Buttes-Chaumont	19eme Ardt	48.887076	2.384821
2	14	Observatoire	14eme Ardt	48.829245	2.326542
3	10	Entrepot	10eme Ardt	48.876130	2.360728
4	12	Reuilly	12eme Ardt	48.834974	2.421325
5	16	Passy	16eme Ardt	48.860392	2.261971
6	11	Popincourt	11eme Ardt	48.859059	2.380058
7	2	Bourse	2eme Ardt	48.868279	2.342803
8	4	Hotel-de-Ville	4eme Ardt	48.854341	2.357630
9	17	Batignolles-Monceau	17eme Ardt	48.887327	2.306777
10	18	Buttes-Montmartre	18eme Ardt	48.892569	2.348161
11	1	Louvre	1er Ardt	48.862563	2.336443
12	5	Pantheon	5eme Ardt	48.844443	2.350715
13	7	Palais-Bourbon	7eme Ardt	48.856174	2.312188
14	20	Menilmontant	20eme Ardt	48.863461	2.401188
15	8	elysee	8eme Ardt	48.872721	2.312554
16	9	Opera	9eme Ardt	48.877164	2.337458
17	13	Gobelins	13eme Ardt	48.828388	2.362272
18	15	Vaugirard	15eme Ardt	48.840085	2.292826
19	6	Luxembourg	6eme Ardt	48.849130	2.332898

Located and foreign the relevant location information for the districts of Paris and made a data frame. Defined the business objective, strategy and ways to attain our goal. Next step are going to be leverage Foursquare location information to get information on high traffic areas - wherever shoppers select looking, restaurants and diversion - altogether of the twenty districts.

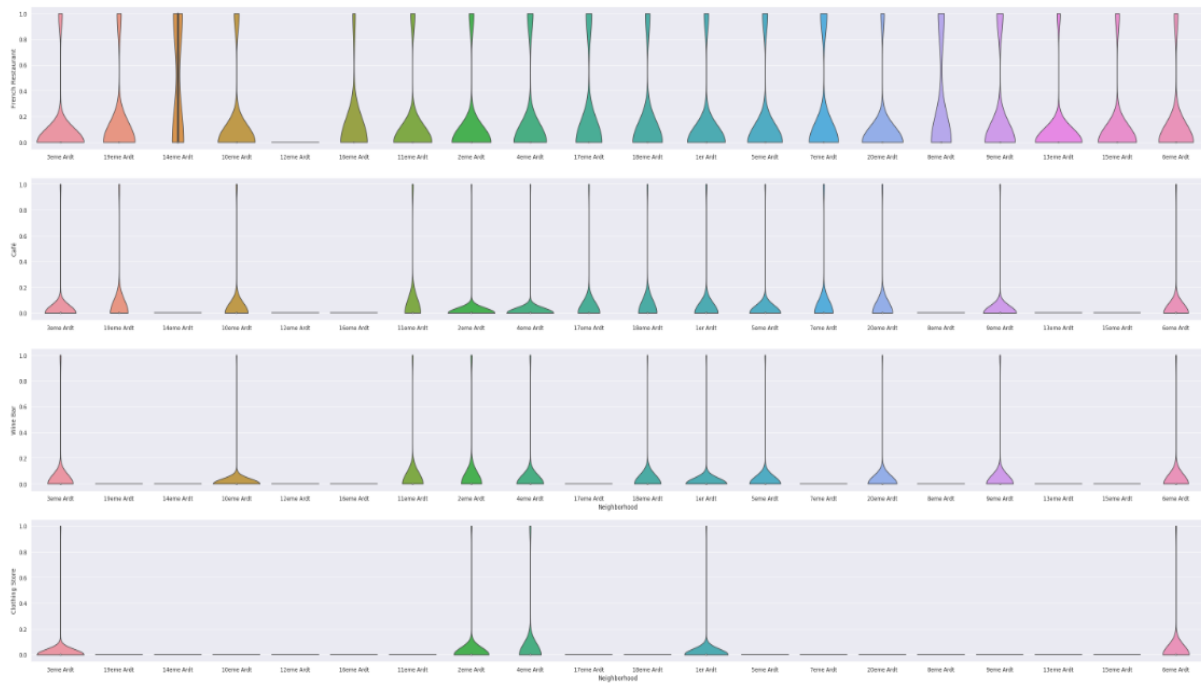
Frequency distribution for the top 3 venue categories for each neighborhood (click to enlarge)



So as we are able to see from the analysis there are ten neighborhoods that may be smart places to open a mercantile establishment thanks to the high concentration of Restaurants, Cafe's and Wine bars which might draw the amount of pedestrian traffic required to sustain the high demand for the mercantile establishment. Neighborhoods that would make suitable candidates are:

3eme Ardt,
 10eme Ardt,
 11eme Ardt,
 4eme Ardt,
 18eme Ardt,
 1er Ardt,
 5eme Ardt,
 20eme Ardt,
 9eme Ardt,
 6eme Ardt.

Frequency distribution for the top 3 venue categories for each neighborhood (includes clothing)



So we are able to increase the standards to incorporate outfitters - that focuses the instructed districts for brand spanking new stores to be settled, and at an equivalent time provides higher locations for the complete thanks to hyperbolic presence of article of clothing retailers within the space drawing even a lot of pedestrian traffic to the world. The final 5 prospective neighborhoods for new store locations where 4 criteria are met:

- 3eme Ardt,
- 2eme Ardt,
- 4eme Ardt,
- 1er Ardt,
- 6eme Ardt.

	Neighborhood	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
0	10eme Ardt	French Restaurant	Bistro	Coffee Shop	Café	Indian Restaurant	Hotel	Pizza Place	Japanese Restaurant	E
1	11eme Ardt	French Restaurant	Café	Restaurant	Bakery	Pastry Shop	Wine Bar	Supermarket	Italian Restaurant	J F
2	12eme Ardt	Zoo Exhibit	Supermarket	Monument / Landmark	Zoo	Hotel Bar	Fish & Chips Shop	Farmers Market	Falafel Restaurant	E
3	13eme Ardt	Vietnamese Restaurant	Asian Restaurant	Thai Restaurant	Chinese Restaurant	French Restaurant	Juice Bar	Cambodian Restaurant	Cosmetics Shop	F M
4	14eme Ardt	French Restaurant	Hotel	Plaza	Supermarket	Bistro	Tea Room	Bakery	Italian Restaurant	F
5	15eme Ardt	Hotel	Italian Restaurant	French Restaurant	Coffee Shop	Supermarket	Bistro	Lebanese Restaurant	Thai Restaurant	E
6	16eme Ardt	Plaza	Lake	Boat or Ferry	Art Museum	Bus Stop	Trail	Bus Station	Park	F F
7	17eme Ardt	Hotel	French Restaurant	Italian Restaurant	Bakery	Japanese Restaurant	Bistro	Plaza	Restaurant	C
8	18eme Ardt	French Restaurant	Bar	Coffee Shop	Convenience Store	Café	Hotel	Restaurant	Pizza Place	S F
9	19eme Ardt	French Restaurant	Bar	Seafood Restaurant	Brewery	Bistro	Supermarket	Beer Bar	Café	H
10	1er Ardt	French Restaurant	Japanese Restaurant	Hotel	Plaza	Coffee Shop	Art Museum	Italian Restaurant	Café	C
11	20eme Ardt	Japanese Restaurant	Bakery	French Restaurant	Plaza	Bar	Bistro	Italian Restaurant	Café	C
12	2eme Ardt	French Restaurant	Wine Bar	Cocktail Bar	Japanese Restaurant	Coffee Shop	Hotel	Italian Restaurant	Bakery	E
13	3eme Ardt	French Restaurant	Japanese Restaurant	Italian Restaurant	Art Gallery	Burger Joint	Bakery	Cocktail Bar	Coffee Shop	S F
14	4eme Ardt	French	Ice Cream	Clothing	Hotel	Plaza	Italian	Wine Bar	Pedestrian	C

Conclusion

This analysis complete five prospective neighborhoods in Paris that a replacement article of clothing mercantile establishment would have ample pedestrian traffic. exploitation restaurants, cafe's, wine bars and also the addition of outfitters is merely a way to see pedestrian traffic of the many totally different criteria offered. However, I selected to stay things rather straightforward for this purpose.