

The Battle of Neighborhoods

IBM Applied Data Science

Capstone Coursera Training

Recommendation of a Business to establish in a London Borough and a
Paris District

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Introduction

- Our client is an Investor Group, who owns several Companies in United States and they want to open two new Businesses Branches in Paris and London. They want to be able to share resources and knowledge across both Business. They want to identify what kind of businesses are successful on both cities and to identify neighborhoods with similar profiles and characteristics.
- As cities are geographically near, chosen cities, would allow using the K-Means Clustering and Geographical Information viewable in the same map. Clusters will allow grouping Neighborhoods, based on similar characteristics (frequency and types of Foursquare Venues)
- Paris and London are Financial Capitals of their Countries and relatively near of each other (456 km and 4 hours driving).

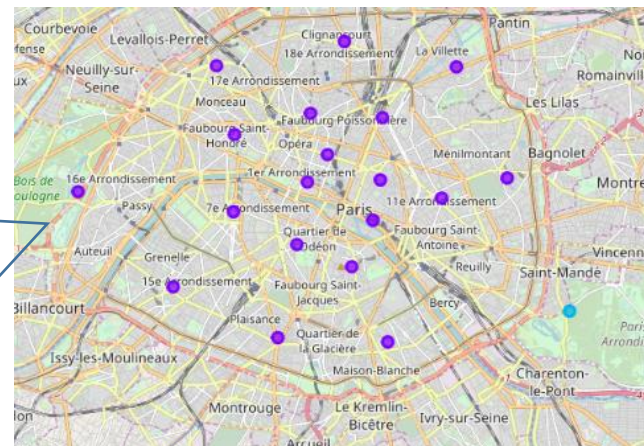
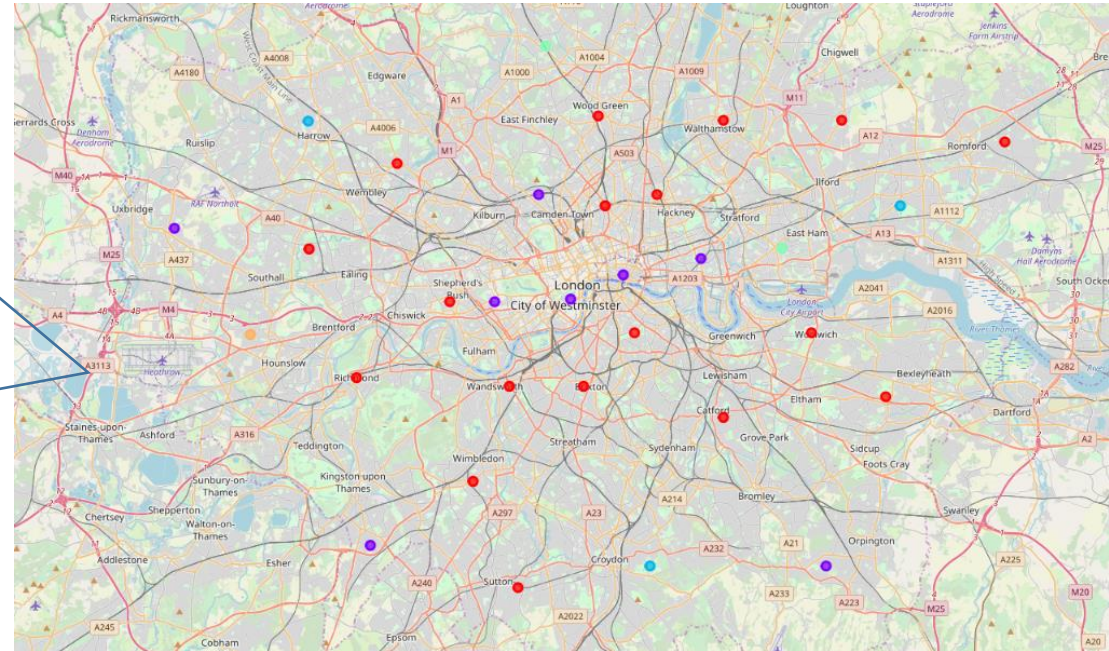
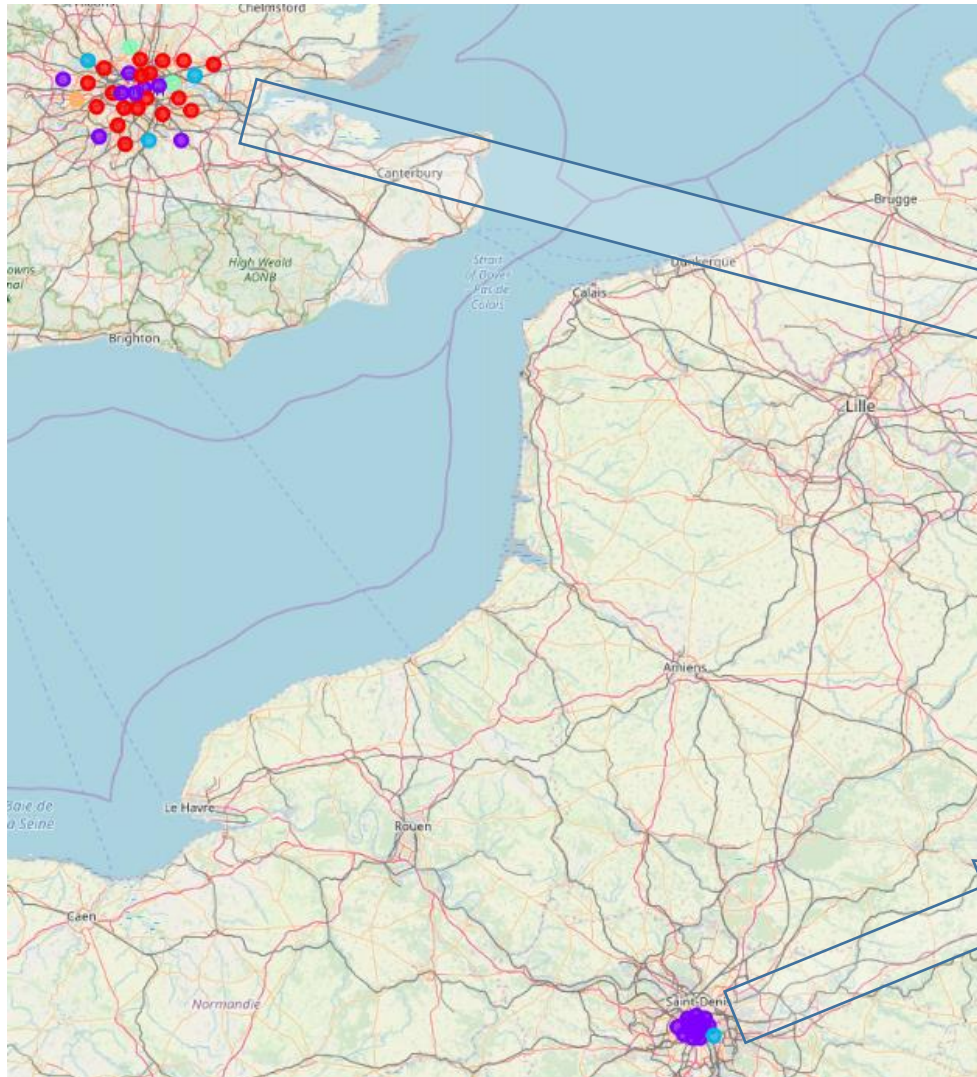
12 Paris Districts and 32 London Boroughs



Clusters 1 and 2

	NeighborhoodGroup	City	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	Cluster Labels
18	Batignolles-Monceau	Paris	French Restaurant	Hotel	Italian Restaurant	Café	Plaza	Bakery	Restaurant	Japanese Restaurant	Bistro	Bus Stop	1
19	Bourse	Paris	French Restaurant	Wine Bar	Bistro	Hotel	Japanese Restaurant	Salad Place	Cocktail Bar	Italian Restaurant	Bar	Bakery	1
20	Bromley	London	Bed & Breakfast	Construction & Landscaping	Tennis Court	Forest	Flower Shop	Fish & Chips Shop	Field	Fast Food Restaurant	English Restaurant	Farm	1
21	Buttes-Chaumont	Paris	Bar	French Restaurant	Hotel	Restaurant	Seafood Restaurant	Beer Bar	Brewery	Bistro	Farmers Market	Pizza Place	1
22	Buttes-Montmartre	Paris	Bar	French Restaurant	Pizza Place	Convenience Store	Italian Restaurant	Hotel	Bistro	Vietnamese Restaurant	Restaurant	Gastropub	1
23	Camden	London	Pharmacy	Bakery	Gastropub	Café	Coffee Shop	Pizza Place	American Restaurant	Bookstore	Burger Joint	Museum	1
24	City of London	London	Coffee Shop	Gym / Fitness Center	Italian Restaurant	Pub	Seafood Restaurant	Wine Bar	Sandwich Place	Asian Restaurant	Cocktail Bar	French Restaurant	1
25	Entrepôt	Paris	French Restaurant	Bistro	Coffee Shop	Indian Restaurant	Café	Bar	Pizza Place	Japanese Restaurant	Italian Restaurant	Furniture / Home Store	1
26	Gobelins	Paris	Vietnamese Restaurant	Asian Restaurant	Chinese Restaurant	French Restaurant	Thai Restaurant	Japanese Restaurant	Juice Bar	Pizza Place	Bakery	Butcher	1
27	Hillingdon	London	Chinese Restaurant	Breakfast Spot	Bakery	Gym	Yoga Studio	Falafel Restaurant	Event Space	Exhibit	Fabric Shop	Farmers Market	1
28	Hôtel-de-Ville	Paris	French Restaurant	Ice Cream Shop	Hotel	Pub	Wine Bar	Pastry Shop	Plaza	Bakery	Tea Room	Garden	1
29	Kensington and Chelsea	London	Café	Italian Restaurant	Pub	Clothing Store	Bakery	Garden	Burger Joint	French Restaurant	English Restaurant	Gym / Fitness Center	1
30	Kington upon Thames	London	Tourist Information Center	Gym	Breakfast Spot	Gym / Fitness Center	Theater	Fabric Shop	Ethiopian Restaurant	Event Space	Exhibit	Farm	1
31	Louvre	Paris	French Restaurant	Hotel	Café	Plaza	Exhibit	Japanese Restaurant	Historic Site	Restaurant	Coffee Shop	Art Museum	1
32	Luxembourg	Paris	French Restaurant	Hotel	Italian Restaurant	Bakery	Wine Bar	Tea Room	Bistro	Ice Cream Shop	Pastry Shop	Japanese Restaurant	1
33	Ménilmontant	Paris	Italian Restaurant	French Restaurant	Bakery	Bistro	Café	Plaza	Bar	Sushi Restaurant	Indian Restaurant	Japanese Restaurant	1
34	Observatoire	Paris	French Restaurant	Hotel	Pizza Place	Bike Rental / Bike Share	Cosmetics Shop	Café	Fast Food Restaurant	Food & Drink Shop	Miscellaneous Shop	Brasserie	1
35	Opéra	Paris	French Restaurant	Hotel	Cocktail Bar	Bar	Bistro	Bakery	Japanese Restaurant	Wine Bar	Lounge	Italian Restaurant	1
36	Palais-Bourbon	Paris	French Restaurant	Hotel	Italian Restaurant	Plaza	Café	Cocktail Bar	History Museum	Coffee Shop	Bakery	Bistro	1
37	Panthéon	Paris	French Restaurant	Bar	Italian Restaurant	Café	Plaza	Hotel	Greek Restaurant	Wine Bar	Museum	Pub	1
38	Passy	Paris	Plaza	French Restaurant	Bus Stop	Boat or Ferry	Lake	Bike Rental / Bike Share	Art Museum	Bus Station	Pool	Flower Shop	1
39	Popincourt	Paris	French Restaurant	Bar	Restaurant	Cocktail Bar	Japanese Restaurant	Theater	Pizza Place	Italian Restaurant	Café	Wine Bar	1
40	Temple	Paris	French Restaurant	Bistro	Coffee Shop	Café	Hotel	Wine Bar	Japanese Restaurant	Boutique	Italian Restaurant	Sandwich Place	1
41	Tower Hamlets	London	Turkish Restaurant	Track Stadium	Museum	Go Kart Track	Canal Lock	Recreation Center	Middle Eastern Restaurant	Athletics & Sports	Thrift / Vintage Store	Coffee Shop	1
42	Vaugirard	Paris	French Restaurant	Hotel	Italian Restaurant	Indian Restaurant	Bistro	Thai Restaurant	Coffee Shop	Park	Lebanese Restaurant	Bakery	1
43	Westminster	London	Hotel	Sandwich Place	Coffee Shop	Outdoor Sculpture	Café	Sushi Restaurant	Plaza	Hotel Bar	Garden	Juice Bar	1
44	Élysée	Paris	French Restaurant	Hotel	Bakery	Japanese Restaurant	Italian Restaurant	Art Gallery	Cocktail Bar	Theater	Bar	Salad Place	1
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45	Barking and Dagenham	London	Construction & Landscaping	Park	Yoga Studio	English Restaurant	Flower Shop	Fish & Chips Shop	Field	Fast Food Restaurant	Farmers Market	Farm	2
46	Croydon	London	Disc Golf	Park	Soccer Field	Yoga Studio	Ethiopian Restaurant	Flower Shop	Fish & Chips Shop	Field	Fast Food Restaurant	Farmers Market	2
47	Harrow	London	Convenience Store	Park	Yoga Studio	English Restaurant	Flower Shop	Fish & Chips Shop	Field	Fast Food Restaurant	Farmers Market	Farm	2
48	Reuilly	Paris	Monument / Landmark	Supermarket	Park	Bike Rental / Bike Share	Yoga Studio	Food Truck	Flower Shop	Fish & Chips Shop	Field	Fast Food Restaurant	2

Identified 5 Clusters by similar characteristics



Only Cluster 1 (purple) and Cluster 2 (cyan) exist in Both Cities.

Observations

- Our Geographic and Venue Categories Analysis was obtained with Foursquare API, and by using the K-means Clustering Machine Learning, unsupervised algorithm, to compare how similar are France Districts to Paris Boroughs, in terms in Venue Categories.
- As per Data Visualization, Even though Clusters 1 and 2 happen in both Cities, but there are less elements belonging to Cluster 2.
- By Analyzing the Districts in the common Clusters, One option could be to evaluate establishing a French Restaurant in both London and Paris. However, French Restaurant is one of the most common Venue Categories in most of the Paris Districts in Cluster 1, which means more competitors. For this reason, Cluster 2 can be considered and Option with less competitors

Recommendations

- From the most common Venue Categories in Cluster 2, there are several options that suggest healthy and environment friendly lifestyle, such as Farmers Markets, Fields, Gold Yoga, Bike Rental / Bike Sharing and Parks.
- As per the previous Analysis, I recommend to coordinate a Market and Feasibility Study for a Fast Food Restaurant with Healthy Options as a brand differentiator in Croydon, London and Reuilly Paris.