

Clustering and segmenting Neighborhood in Rennes, France

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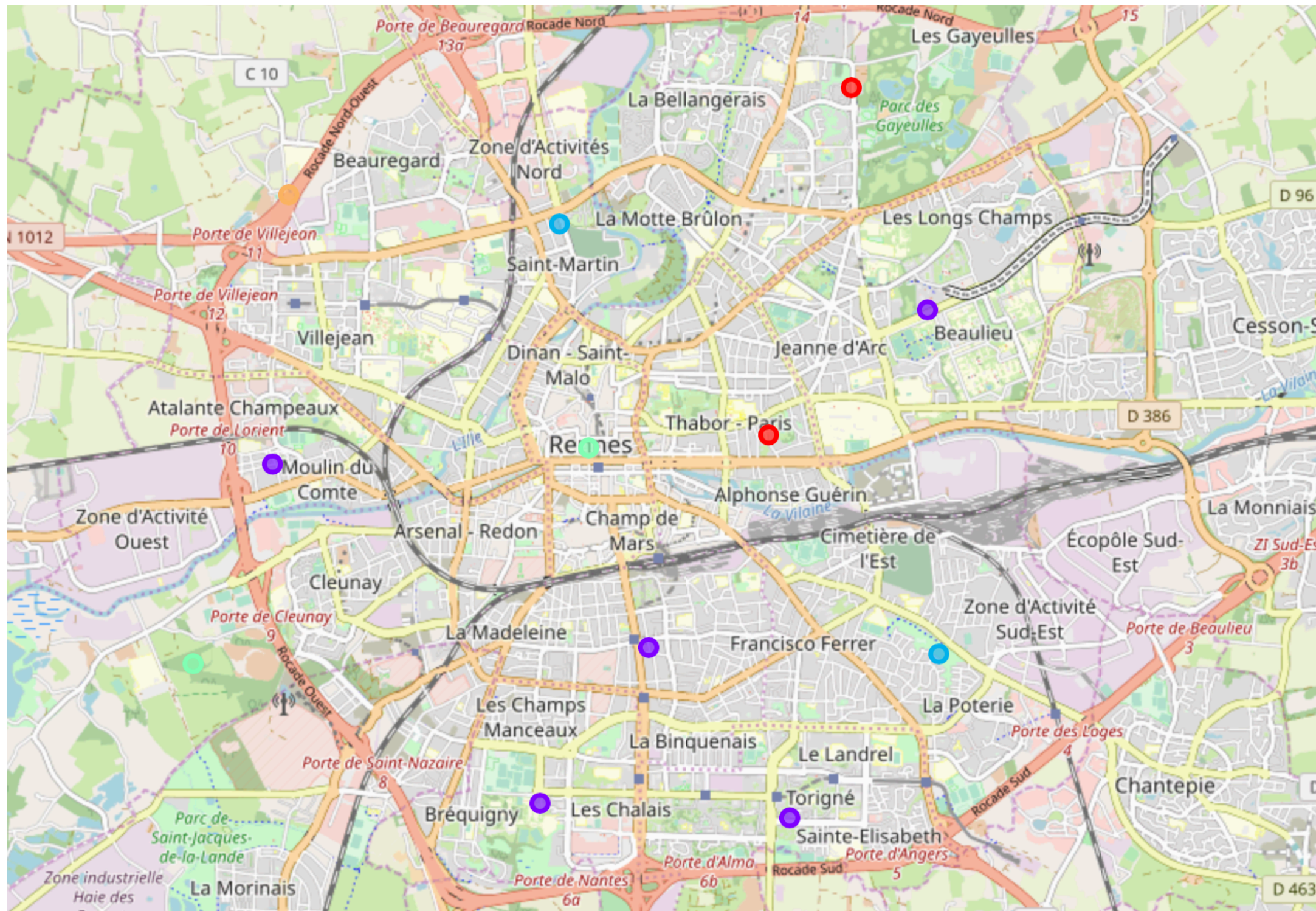
Choice of datas

- Foursquare API :
 - Most common venues in Rennes with notes
- Rennes Open Data Website :
 - Number of Bus stops
 - Number of charger for electric vehicles
 - Number of paid parking
 - Number of bike supports
 - Number of green roads
 - Number of culture equipment

K-mean clustering

- There are many models for clustering out there. Here we will be presenting the model that is considered the one of the simplest model among them. Despite its simplicity, k -means is vastly used for clustering in many data science applications, especially useful if you need to quickly discover insights from unlabeled data.
- Some real-world applications of k -means include:
 - customer segmentation,
 - understand what the visitors of a website are trying to accomplish,
 - pattern recognition, and,
 - data compression.
- Here we will use K-mean clustering to find the neighborhood of Rennes that have a similar way of life for the people that live in.

Results



Clusters

- Purple cluster

	Neighbourhood	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
0	Le Blosne	green roads	bike stops	cultural equipment	bus stop	Metro Station	Shopping Mall	Performing Arts Venue	Fast Food Restaurant	Creperie	Cupcake Shop
4	Bréquigny	green roads	bike stops	bus stop	cultural equipment	American Restaurant	Supermarket	Gym Pool	Park	Stadium	Hotel
5	Jeanne d'Arc - Longs Champs - Beaulieu	green roads	bus stop	bike stops	cultural equipment	electric car charger	Bus Stop	College Cafeteria	Stadium	Concert Hall	Creperie
6	Sud gare	green roads	bike stops	parking	bus stop	cultural equipment	electric car charger	Metro Station	Fast Food Restaurant	Shop & Service	Thrift / Vintage Store
7	Bourg l'Evesque - La Touche - Moulin du Comte	green roads	bus stop	bike stops	cultural equipment	electric car charger	Bus Stop	Grocery Store	French Restaurant	Soccer Stadium	parking

- Red cluster

	Neighbourhood	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
8	Maurepas - Bellangerais	green roads	bus stop	bike stops	cultural equipment	Tennis Court	Gym Pool	Skating Rink	Fast Food Restaurant	Creperie	Cupcake Shop
9	Thabor - Saint-Hélier - Alphonse Guérin	parking	green roads	bike stops	bus stop	cultural equipment	Bus Stop	electric car charger	Wine Shop	Park	Art Museum

Clusters

- Blue cluster

	Neighbourhood	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
2	Saint Martin	green roads	bus stop	bike stops	parking	cultural equipment	Food & Drink Shop	Grocery Store	Bus Stop	Thrift / Vintage Store	Auto Workshop
10	Francisco Ferrer - Landry - Poterie	green roads	bus stop	bike stops	cultural equipment	Park	French Restaurant	Auto Workshop	Bus Stop	Garden	Falafel Restaurant

- Green cluster

	Neighbourhood	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
1	Cleunay - Arsenal - Redon	green roads	cultural equipment	bus stop	bike stops	Soccer Field	French Restaurant	Food & Drink Shop	Creperie	Cupcake Shop	Falafel Restaurant
11	Centre	parking	green roads	bike stops	bus stop	cultural equipment	electric car charger	Bar	Plaza	Coffee Shop	Creperie

- Orange cluster

	Neighbourhood	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
3	Villejean - Beauregard	green roads	bike stops	bus stop	cultural equipment	parking	Concert Hall	Historic Site	Gym Pool	Grocery Store	Garden

Observation

- Lack of data for Rennes on Foursquare
- Datas from Rennes website are taking the lead
- If Foursquare datas were dropped, the resulting clusters are the same

Conclusion

- Datas from Rennes neighborhood are available online and there is so much that can be extracted in order to form clusters of neighborhood depending on the aspect that can be of importance for the being that is looking to settle in the city of Rennes or for the ones that are looking for the neighborhood that if corresponding to their way of life, nearer of their work place.