Data

- Geographical data, explore location and nearby venues, [Foursquare API](#)

- Signals of anomalies by type and location (2017-2019) from OpenData, [Dans-ma-rue](#)

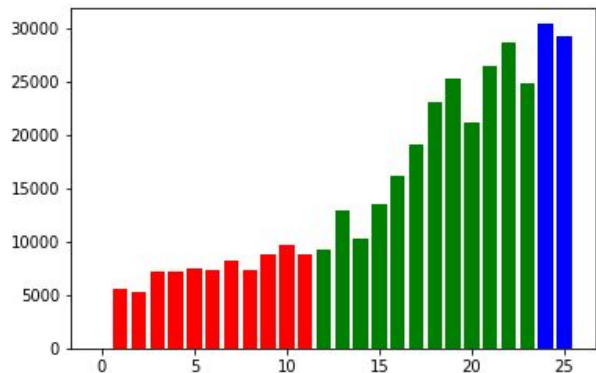- Paris borough from OpenData, [Paris arrondissement](#)

Data cleaning

All anomalies are not necessarily related to vandalism, useful ones are highlighted
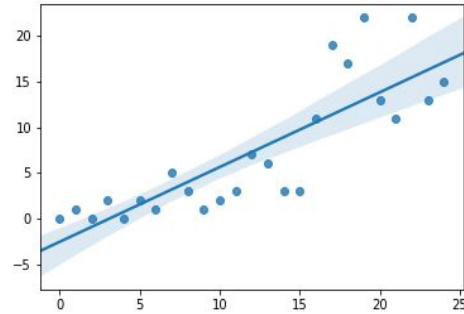
1) **Graffitis, tags, affiches et autocollants: public vandalism**
2) Voirie et espace public: Street deterioration
3) **Mobiliers urbains: urban furniture deterioration**
4) **Proprete: Piss on the street**
5) Eclairage /Electricite: malfunctions of public lights
6) Objets abandonnes: cumbersome objects left on the street
7) Arbres, veǵetaux et animaux: dangerous tree or presence of rats, maintenance issue
8) Eau: flood, water related issues
9) **Autos, motos, velos...: abandonned/wreck vehicles**
10) Activites commerciales et professionnelles: fraudulous use of Paris' logo or colors

101,048 signals in total

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Graffitis, tags, affiches et autocollants     77214
Autos, motos, vélos...                          9447
Mobiliers urbains                               9316
Propreté                                        5071
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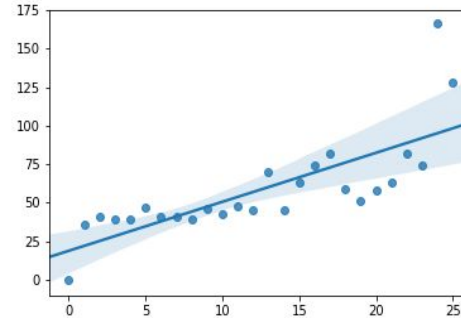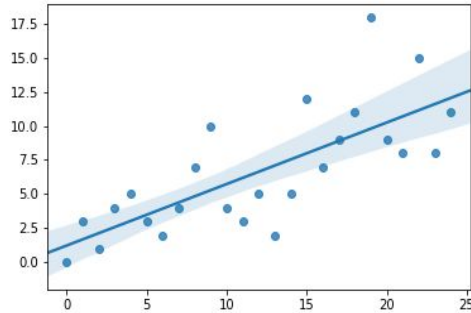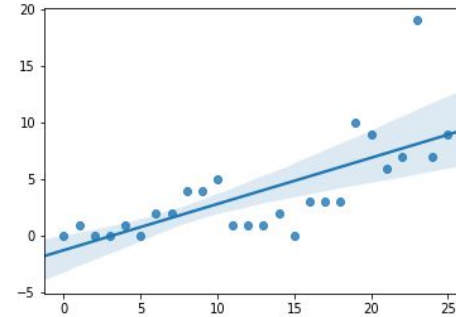
Evolution over month of each categories

Autos, motos, velos...

Graffitis, tags, affiches et autocollants
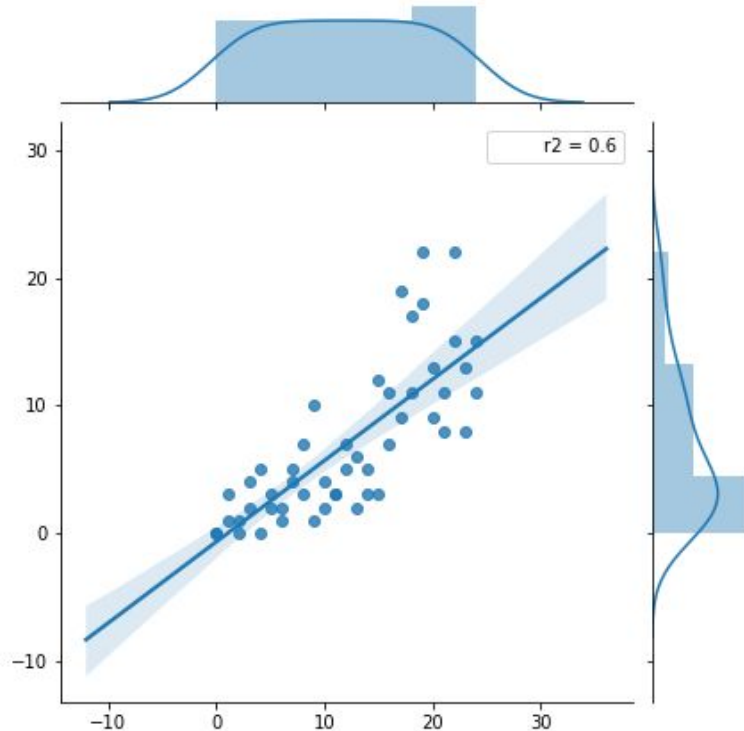
Mobiliers urbains

Propreté

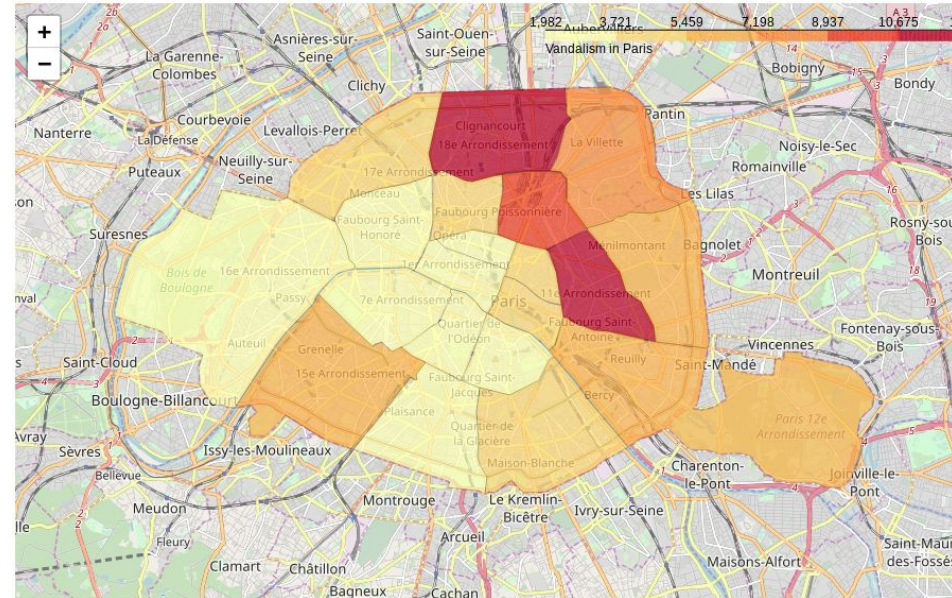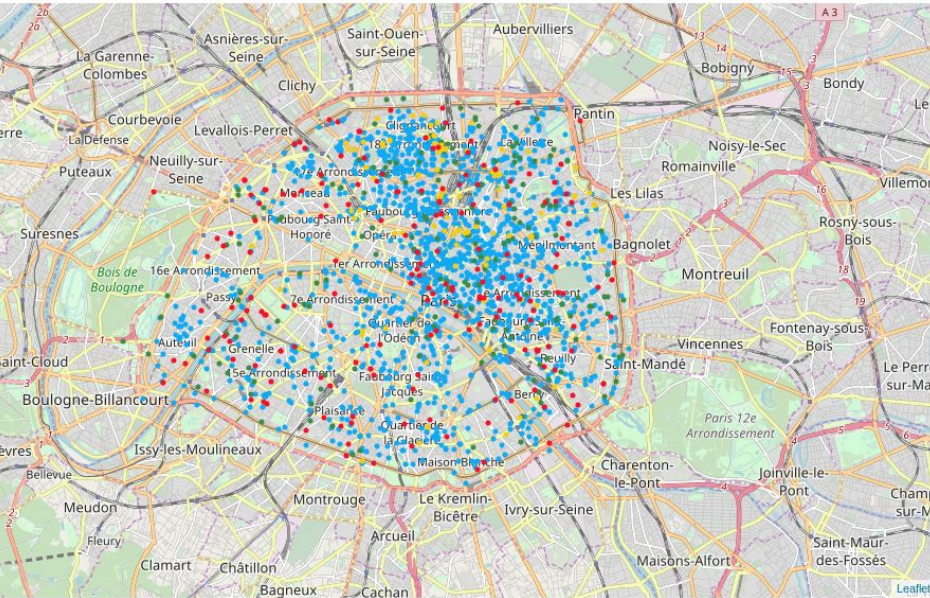All kinds of vandalism has been raising

Relation between "Autos, motos, velos..." and "Mobiliers urbains"

R2 = 0.6
Sufficient,

"Autos, motos, velos..." + "Mobiliers urbains"
=> "Destruction"

Geographical visualization

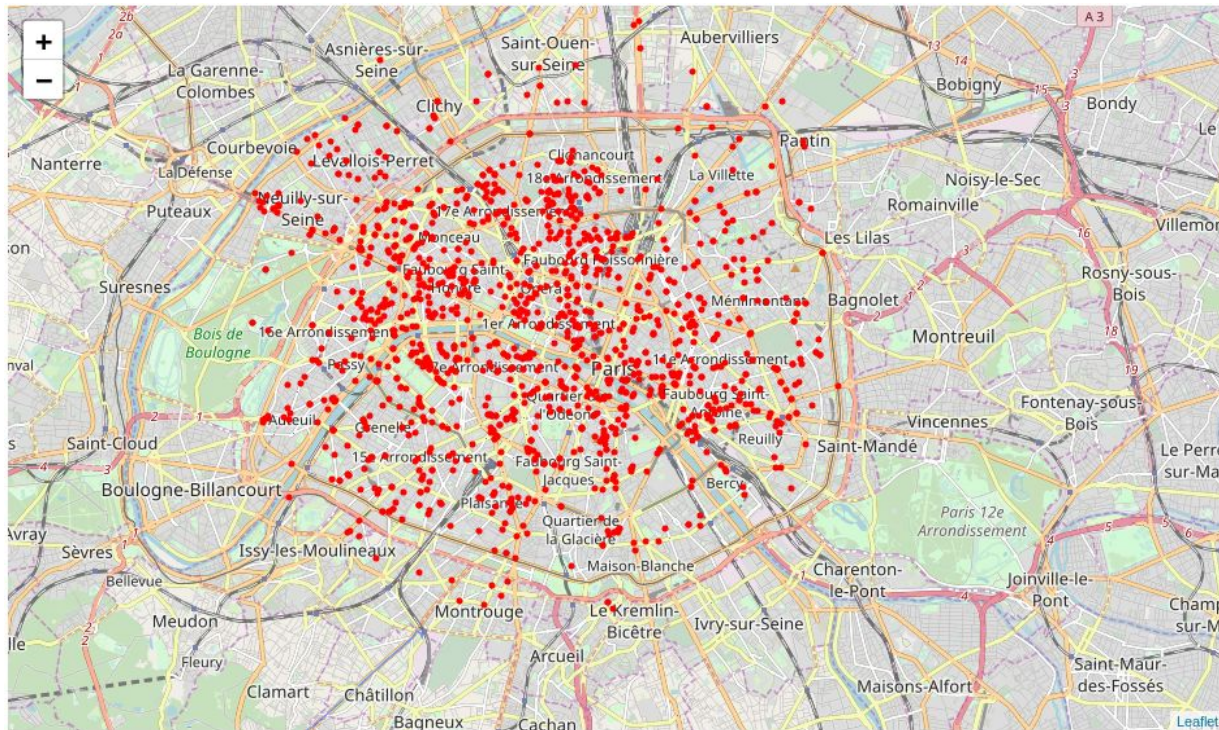Most of the vandalism happen in the northern-east side of Paris.

Foursquare, most common venues

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[('French Restaurant', 4005),
 ('Bar', 3106),
 ('Café', 1968),
 ('Bakery', 1860),
 ('Hotel', 1728)]
```

That is the distribution for all kind of vandalism, but the distribution for each categories doesn't change much, the top 2 are constant.

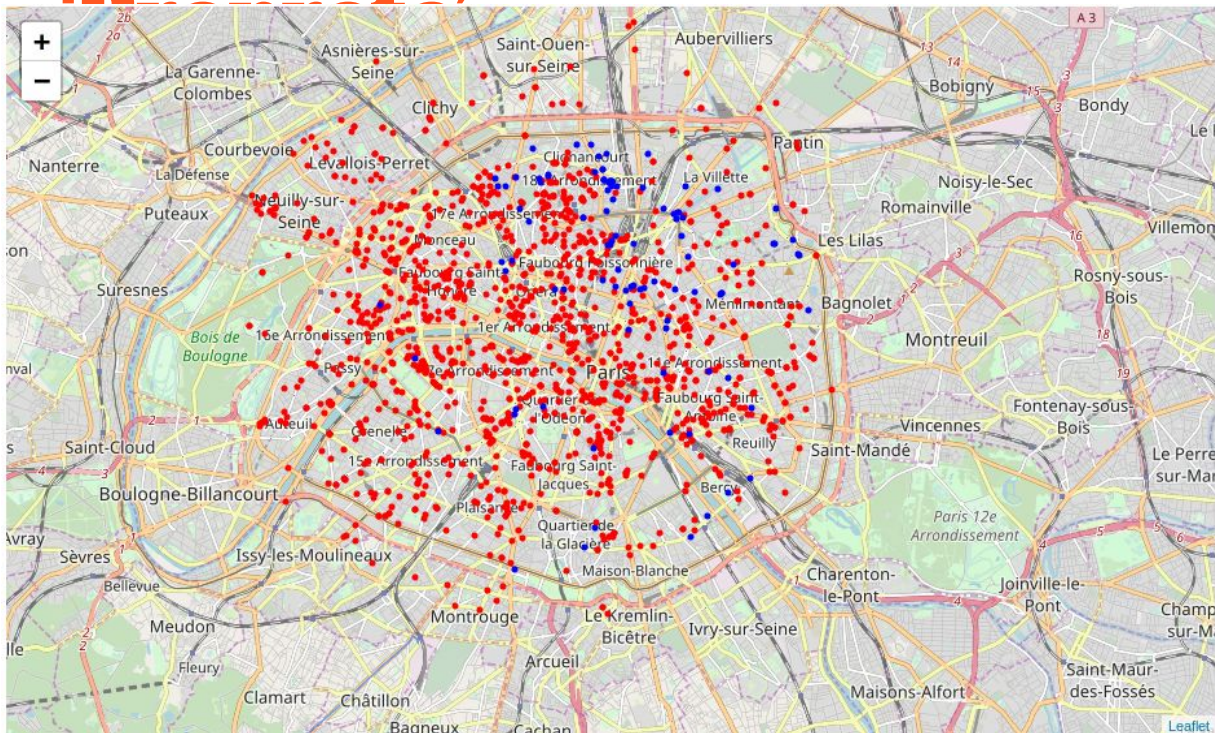With "French Restaurant" leading with a safe margin.

Venues on Map

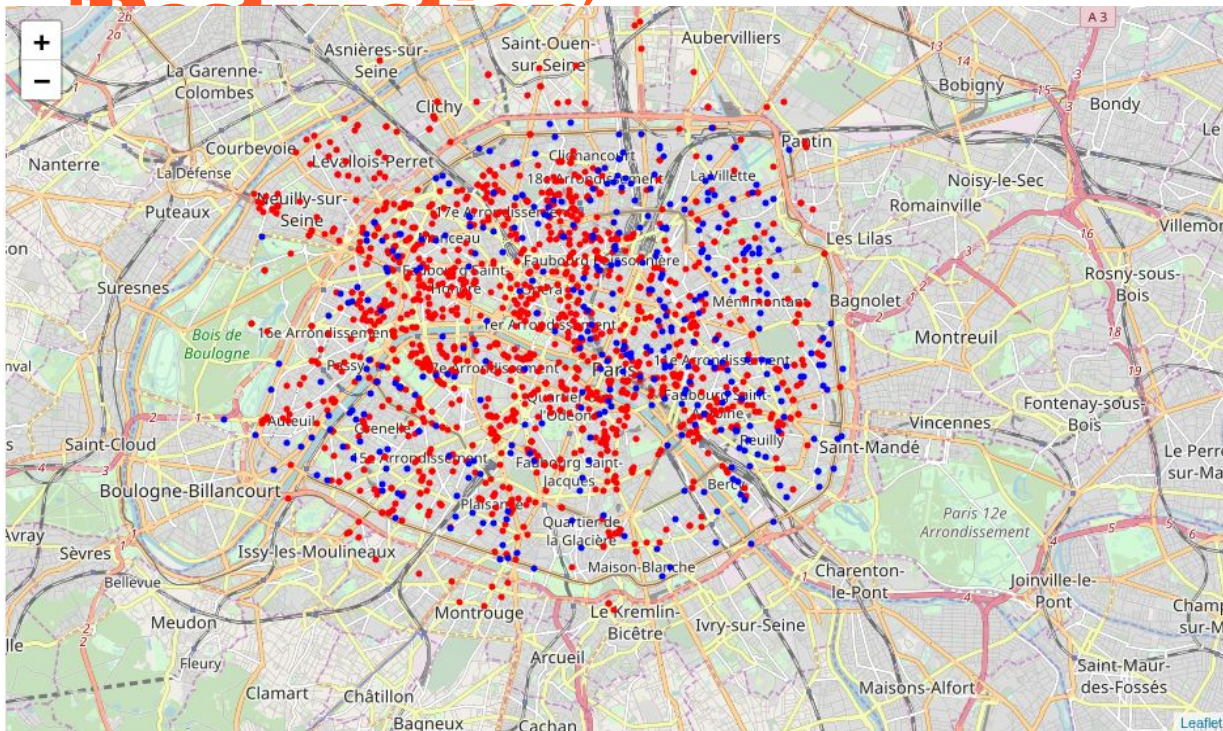This is the map where all French restaurant of Paris are indicated.

We can see they are mostly spread in the center and north-western side of Paris.

Venues and signals correlation, 'Proximité'

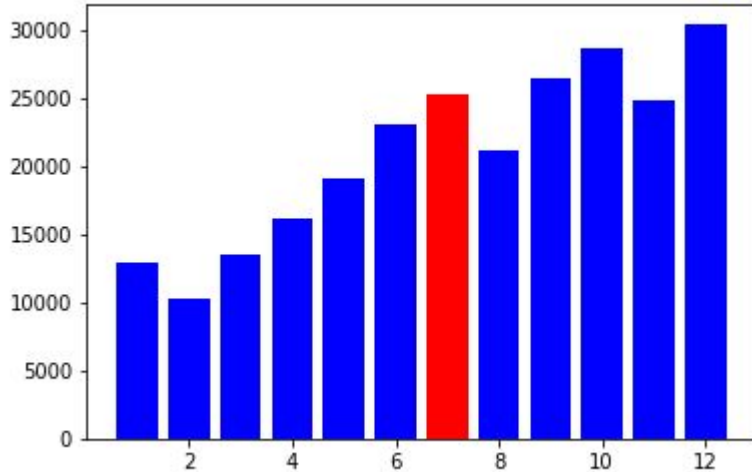Doesn't seem to be a correlation here.

Venues and signals correlation, 'Restaurtion'

We don't see a concentration of the signals in the areas with higher density of French restaurants.

Venues and signals correlation, 'Graffitis, …'

There might or might not be a correlation, here it's hard to say.

But since the western side is not that affected, it's more likely to have no correlation.

Signals and events correlation

July 2018 has seen the world championship of football, French became the world champions. It is said that football event often lead stores to close due to high risk of damage to establishments.

The football competition did actually raise the bar, for the summer period at least. Then declined right after, until another thing takes place around September.

We can easily assume it's the strong dissatisfaction toward Macron's policies (yellow jackets, black blocks and Benalla's doings). That would explain the sudden raise of vandalism.

Conclusion

- Vandalism indeed has been raising, equally from all kind.

- North-eastern areas of Paris are the most affected.

- Social events have a noticeable impact of Vandalism.