



Données géolocalisée, données satellite et IA : comment construire de nouveaux services non-personnels ?

Centrale Energie - avril 19

Gaël GRASSET - 17 avril

the Open Data: open but not actionable

250+

Open Data
platforms
available in
France

3000+

Open Data
platforms
available in the
world

1.500k

datasets
accessible
in
France

6 HR imagery to this point

infrared and RGB

50, 20 and 12,5 cm resolution
one from 1949, 1998, 2013

How to make the Open Data actionable ?

the digital twin: the Open Data made actionable



April, 17th

nam.R

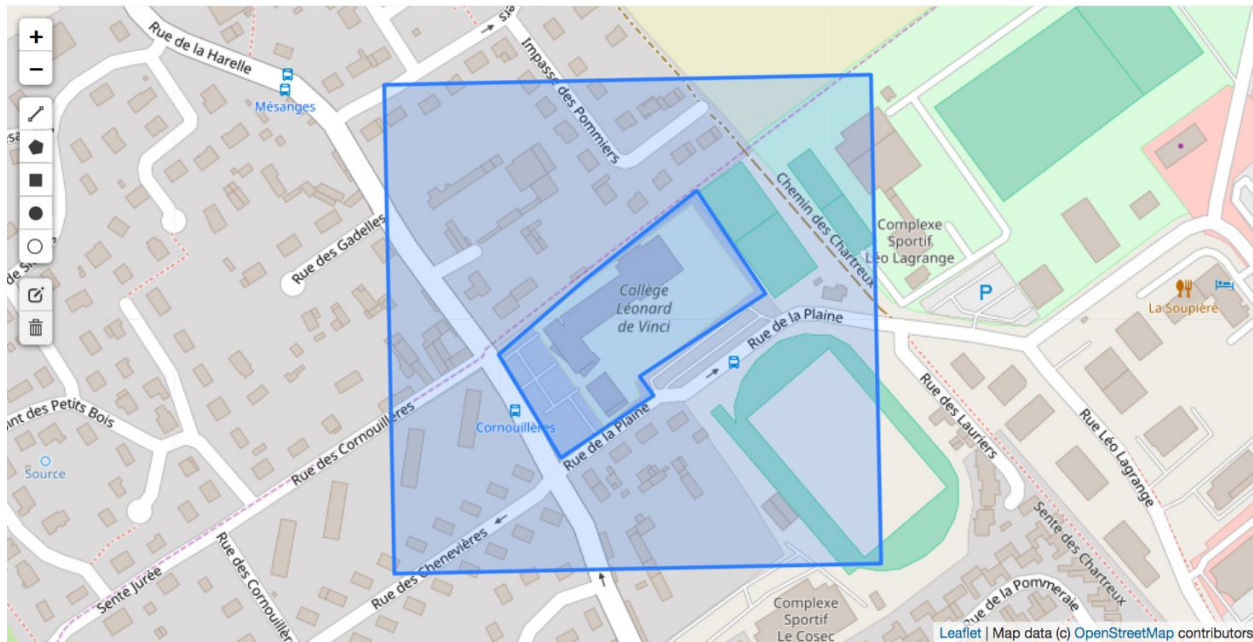
www.namr.com

geomet.R: a Python package for geospatial computations

```
from geometR import GeoObject

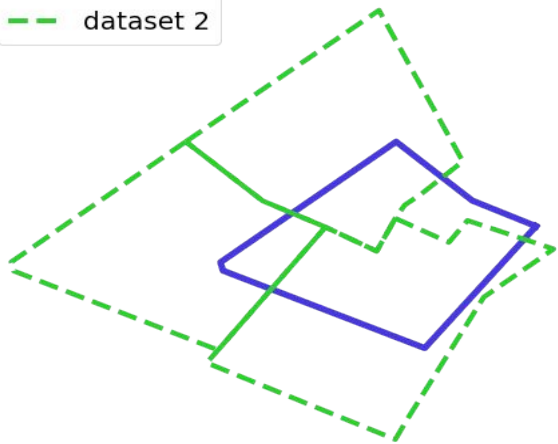
geom_object = GeoObject(
    type='Polygon',
    coordinates = [
        [
            (586468.4, 6890435.2),
            (586431.2, 6890499.2),
            (586485.1, 6890544.2),
            (586554.8, 6890597.2),
            (586596.5, 6890533.6),
            (586517.4, 6890484.2),
            (586525.9, 6890472.1),
        ]
    ],
    crs=2154,
    order='xy' )

m = geom_object.show_on_map()
geom_object.get_bbox(300).show_on_map(m)
m
```

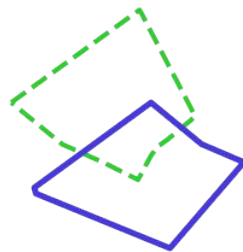


the shape matching algorithm: another geometric computation

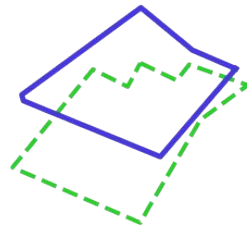
— dataset 1
- - dataset 2



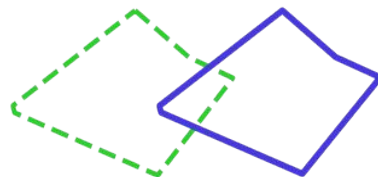
example of building coordinates in different datasets (intersection is not enough)



Score = 0.6



Score = 0.3



Score = 0.9

Beyond aggregating: treating unstructured data...

build our own data: roof slopes segmentation



build our own data: solar panels segmentation



With these data, we create thematic platforms

platforms

nam.R © 2018 - octobre 2018

Our specific platforms allow us to gather complementary key actors around relevant data, in order to generate economies of scale and create new and better services. The platform hence becomes a genuine asset, a mutualized infrastructure dedicated to the exploitation and the creation of value upon the relevant data.

nam.R



tRees



solaR



enRgy



uRban



filters

statistics

Surface

Altitude

100 in m min.

500 in m max.

Roof Type

Roof Material

gabledRoof

aucun

Occupation Type

- ☐ agricultural
- ☐ industrial
- ☐ ancillary
- ☐ tertiary
- ☒ housing
- ☐ other

Distance To Airport

Solar Potential

3 in kWh min.

in km max. in kWh max.

Distance to ICPE

Distance from Historic Building

in m min.

in m max. in m max.

822 Results

Surface 252m²

17 r des aubepines

Solar Potential 41135.62 KWh
 Altitude 149 m
 Closest Airport 21.66 m
 Distance from Classified Building 0.76 m
 Distance from ICPE 0.63 m

Housing Occupation

Industrial Occupation

Tertiary Occupation

Roof Material Tile
 Roof Type Gabled Roof
 Surface 226m²

15 r des aubepines

Solar Potential 24936.19 KWh
 Altitude 149 m
 Closest Airport 21.6 m
 Distance from Classified Building 0.73 m
 Distance from ICPE 0.67 m

Housing Occupation

Roof Material Tile
 Roof Type Gabled Roof
 Surface 137m²

3 bis imp michel ange

Solar Potential 19657.73 KWh
 Altitude 149 m
 Closest Airport 21.41 m
 Distance from Classified Building 0.63 m
 Distance from ICPE 0.19 m

Housing Occupation

Roof Material Tile

Bagnols-sur-Cèze App.

n a m R



our mission is to make accessible data, actionable



**producing
original data**



**connecting
heterogeneous datasets**



**business opportunity
sheets and clusters**



**building
tailored platforms**

Thank you for your attention