



Apache Superset

« non-geo » dataviz in your platform

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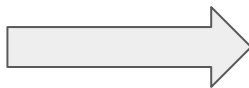
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Implementation

- Dec. 2024 – May 2025
- [GIP #10](#)
- Financed by geo2france
- Implemented by pi-Geosolutions
- Resources :
 - (GIP) <https://github.com/georchestra/improvement-proposals/issues/10>
 - Config & doc source: <https://github.com/georchestra/superset>
 - Superset fork: <https://github.com/georchestra/superset-core>
 - Doc: <https://docs.georchestra.org/superset/en/latest/>

Motivation

Cartographic dataviz



Map server + mapstore/mviewer

We know how to do it

Non-carto dataviz



?

Benchmarking (open source solution)

Metabase



*open source but
freemium commercial
model with limitations*

Superset



***Best match for rookie
and expert profile***

Redash



*Most suitable
for data scientist*

Superwhat ?

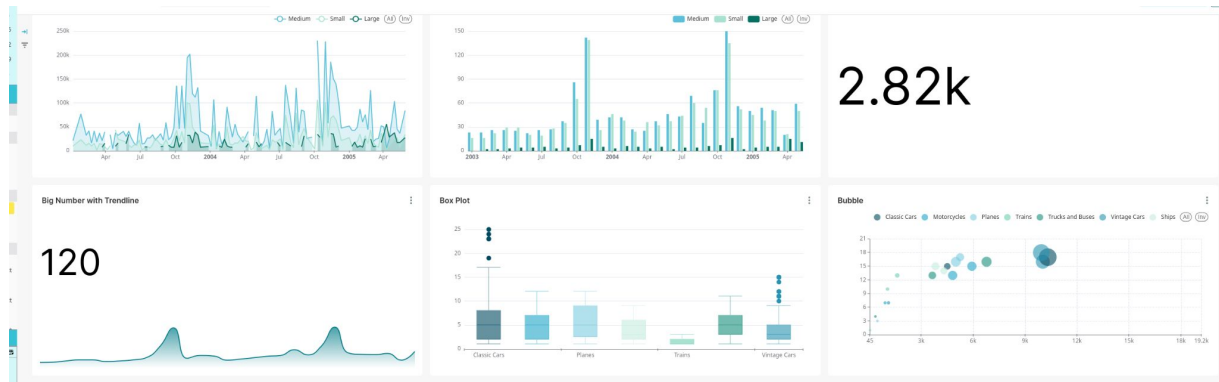
dataviz

business intelligence

dashboards

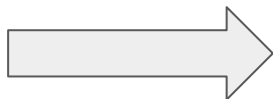
graphs

- [Apache Superset](#)
- Apache Foundation
- Apache v2 licence
- Flask application (python) + frontend in ReactJS



Customising Superset

The config file is a python file (we can declare functions, override functionalities, call functions declared in another file)



- Almost everything is “configuration”
- we hardly touch Superset’s core code (ideally not at all)

Configuration: <https://github.com/georchestra/superset/tree/main/config/superset>

Challenges

- Handle authentication/identification
- Handle user profiles from the geOrchestra console
- Deployable in a domain sub-path
- Deploy in any environment supported by the geOrchestra project: Helm, Docker, Ansible, manually
- Support inserting the geOrchestra header (should be customizable)
- Public dashboards
- Fully operational for the *geo2france data day* (May 13rd, 2025)

Authentication/identification

Superset handles user profiles with a concept of *roles*, very much compatible with the geOrchestra *roles* concept. Integration in geOrchestra covers:

- Use of the Security Proxy / Gateway sec-* headers
- Map SUPERSET_SOMETHING geOrchestra roles to SOMETHING role in Superset
- Changes made in a logged-in user's roles are checked every 5 min (configurable)
- Please read https://docs.georchestra.org/superset/en/latest/technical_guides/administration/manage_roles/

Deployment in a sub-path of a domain

- Necessary feature if we want to serve it behind Security Proxy / Gateway
- Very new feature, brought by PR <https://github.com/apache/superset/pull/30134> merged in master on April 9th 2025.
- We're using this feature, *but implies a non-release branch for now*

Deploy Superset

[Read the doc !](#) and don't forget the *preparation* step

- Helm : we're using the upstream helm chart, just having some specific values. Sample values provided on <https://github.com/georchestra/superset/>
- Docker : we provide a docker compose in <https://github.com/georchestra/superset>
- Ansible : Landry added Superset in the geOrchestra Ansible recipes, <https://github.com/georchestra/ansible/tree/master/roles/superset> . Reading the manual is still recommended to understand your configuration options.
Thank you Landry !

Customizable geOrchestra header

Since <https://github.com/georchestra/header/pull/25> geOrchestra has a configurable header menu.

In the Superset integration, you can:

- link to the default.properties to configure the header
- provide direct configuration values
- disable the header

Configuration structure available in

https://github.com/georchestra/superset/blob/main/config/superset/superset_georchestra_config.py#L59-L69

Making public dashboards

- Not as simple as it sounds. By default, Superset secures all its resources, including dashboards.
- Requires giving the proper access rights to the Public role (a few common ACLs + access to the datasets).
- It's possible to bootstrap the Public role with a template role. The template needs to be loaded on first deployment of the platform, see https://docs.georchestra.org/superset/en/latest/technical_guides/administratio_n/making_a_dashboard_public/#importing-the-guest_template-role
- Please read the doc: https://docs.georchestra.org/superset/en/latest/technical_guides/administratio_n/making_a_dashboard_public/

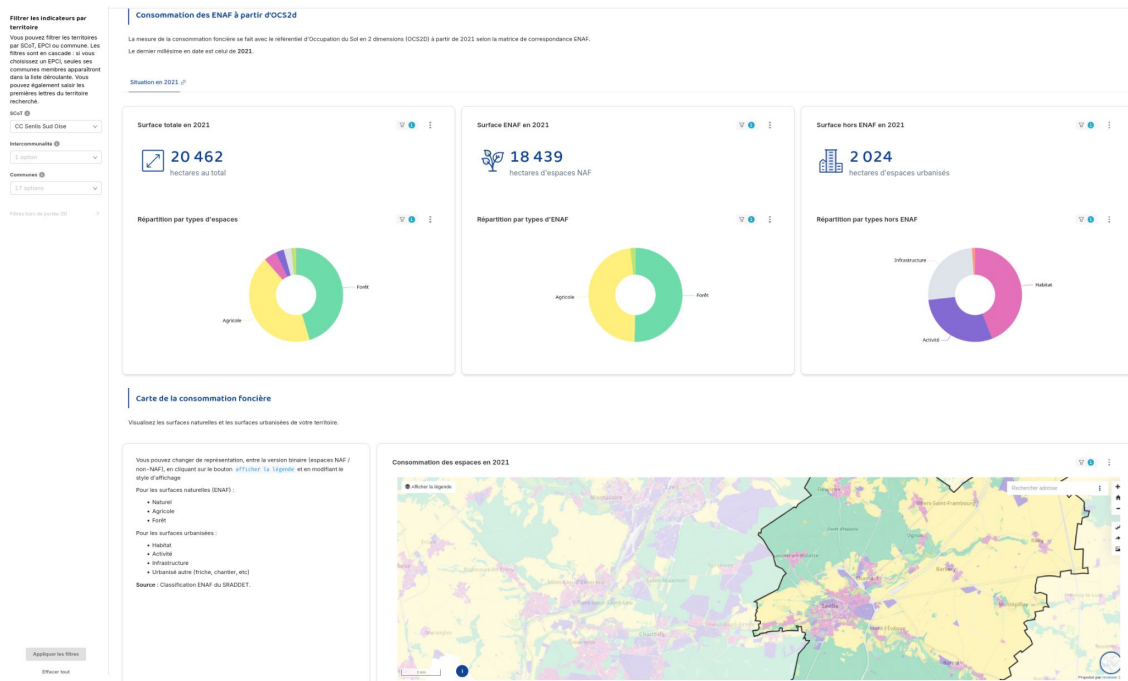
Regional Data Day by geo2france (May 2025, 13rd)

Works ! Fixed the last
perks *just in time*

Great performance
(3.5M lines from a table)

Allow public
dashboard
(see documentation for
best practices)

[>>> See it in Action <<<](#)



Land use data: urban, natural, agricultural, and forest areas dashboard in Hauts-de-France

Still at early stage

- Documentation still in progress
 - <https://docs.georchestra.org/superset/en/latest/>
 - Uses [geOrchestra documentation template](#)
 - Installation doc is complete
 - Administration is in progress
 - No user doc (but this is standard superset doc, really)
- Due to the path prefix PR, we're still on master, not on a stabilized release.
- Only deployed (for now) on geo2france, MEL and dev/testing environments (including <https://demo.georchestra.org/superset>).

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- Doc: <https://docs.georchestra.org/superset/en/latest/>
- Related presentations:
 - *Mapping in SuperSet*, Nicolas Rochard, Fabrice Phung, Tues. 24th, 9:20 AM
 - *New Analytics Module for geOrchestra*, Jean Pommier, Wed. 25th, 10:00 AM

Thanks !

Any questions ? Shoot ! (the questions)