## **Backend Coding Assignment**

Create a small Django REST API serving vector features in a GeoJSON compatible format.

The main goal of this assignment is to assess how you structure your code and workflow.

The Django server should offer the following:

 A CRUD REST API for <u>GeoJSON</u> feature objects. A real **FeatureCollection** object does not allow for paging (limiting the amount of features returned), so a result page may look like this:

```
{
    "next": "http://example.com/features/?page=3"
    "prev": "http://example.com/features/?page=1"
    "results": [<GeoJSON Feature Object>, ...]
}
```

- The features should be able to filtered by a boundingbox (e.g. you are only viewing part of the map) and the results should be paged (100 features per request)
- The API should use **ison web tokens** for authorization
- A **html** frontend page to visualize (using <u>OpenLayers</u> e.g.) the data (no feature editing required, but you are free to implement this)
- A second frontend page where you show the list of features and allow you to edit the
  properties (POST/PATCH) of the features (name, color e.g.). Bonus points: use basic
  styling (Bootstrap etc.) for this page.
- Design how you would store and query the feature data using a <u>PostGIS</u> database or, alternatively, implement it in the Django API to store the data in a PostGIS database.
- Bonus points: provide a <u>Dockerfile</u> and <u>docker-compose.yml</u> to build and test your application easily into a docker container.

## **Deliverables:**

A link to a **public** git repository (github.com, bitbucket.org or gitlab.com) A zip archive containing the following:

- All your source code and other assets required to run and build the app
- A short README.md with instructions on how to run and build the app