

NFDI4Earth+KOMET

RSE/Researcher programming challenge

The main programming language of the task is Python. If you are completely new to Python, please find a JavaScript-based alternative below.

Download a GeoJSON file from <https://datashare.tu-dresden.de/s/XXq9E9fnTdo69zB>. Implement a Python script that applies a time period given in an ISO 8601 time interval as a temporal filter to the data in the Python file. An item from the file should be included in the given filter's period overlaps with the time period in the item's metadata. Implement a small unit test using for the main filtering function that can be started with pytest and is *optionally* executed by the GitHub or GitLab CI. Then, provide a minimal web API so that the filter can be executed in different configurations by implementing the following endpoint: <http://localhost:8000/app?filter=2020-01-02/2021>. The response should be valid GeoJSON including only the items that match the filter.

If you have no Python skills yet, please use the same GeoJSON file to create an interactive single page website that has a simple form for entering the time interval filter and displays matching items in an interactive Leaflet map. Deploy the static website as a GitHub or GitLab page.

Use of existing Python/JavaScript libraries is strongly encouraged even where not mentioned explicitly. Do not apply any styling/CSS.