

awake.ai

Aalto CS-C2130 Project Proposal 2021-2022

Port Configurator - Geometry editor with integration to existing Awake API

1. Introduction

Awake.AI is the thruster that is helping maritime operators move towards the future. We work with all maritime actors at sea, ports, and land, making port operations more efficient, safe and sustainable.

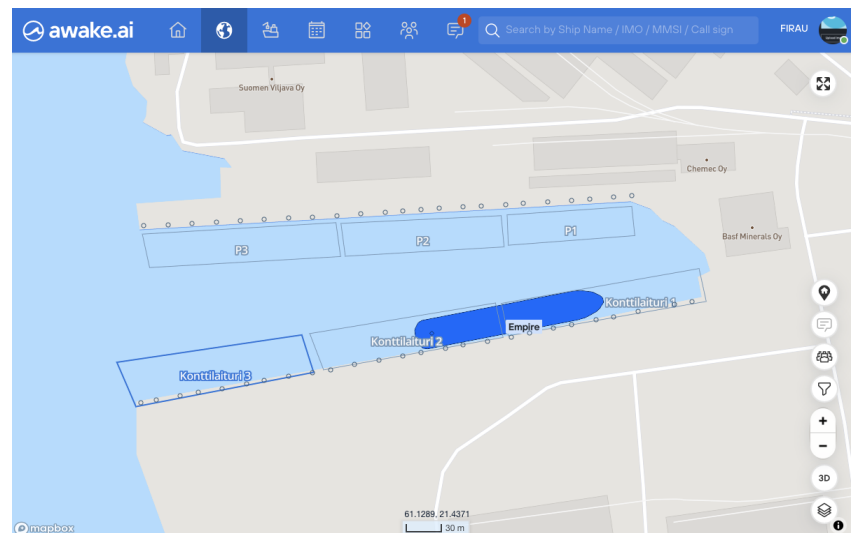
We want to make our Smart Port as a Service platform more scalable and easier for the Ports and other users to take service into use. For that we need a simple tool that allows creating all relevant port resources for certain organizations.

The tool would be used mainly by external organizations that want to add or edit their existing port resources visible at Smart Port application. The existing process for this is somewhat manual. In the future, any registered user can use this tool and mark interesting areas on top of the map.

2. Project goals

The goal of this project is to create an easy to use port configurator. This standalone web-application allows port organizations and Awake itself to create and update port resources. The configurator is required to perform the following functions (in priority order):

1. Create new port area resources and define required attributes, such as the intended usage for the item. An example of a fairly easy to use geometry editor: <https://geojson.io>
2. Transferring the information created by the configurator into Awake systems using provided APIs.



3. Be able to read existing port areas coming from Awake API. In addition, show and edit those areas on top of the map and transfer modified data back to the platform.

The project scope can be easily adjusted to be less or more demanding.

3. Technologies

- The solution should be a browser-based application
- Ideally the solution uses some popular frontend framework. We recommend using React (and perhaps TypeScript).
- If needed, Awake.AI offers general help. (For example architectural decisions)

Rest of the tech stack regarding this area at Awake.AI consists mainly of TypeScript, NodeJS, Docker (Kubernetes) and PostgreSQL.

4. Requirements for the students

- Preferably students would know the basics of web software development. Experience of the following is a plus: TypeScript, NodeJS, Docker and PostgreSQL.
- All the presentations, code and documentation must be in English.
- Students should know the basics of version control systems (Git). The source code and documentation should be hosted in a private repository at GitLab or similar.
- Code should generally be unit tested. Plus: basic integration testing could be conducted after pushing a code to GitLab.
- Interest in learning about the port and logistics domain is also a big plus.
- Interest in learning geo area handling and tools is also a big plus.

5. Legal Issues

Intellectual Property Rights (IPR):

2. The client gets all IPRs to the results.

1. The client will share some confidential information with the students.

6. Client

Awake.AI

Sprint planning and demos can be held at Awake.AI Otaniemi office at A Grid (Otakaari 5). We can provide meeting rooms and spaces from A Grid. Help for technical tasks and questions are provided by the following representatives. If more challenging questions arise during the project (eg. about port domain), Awake will provide expertise related to them.

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