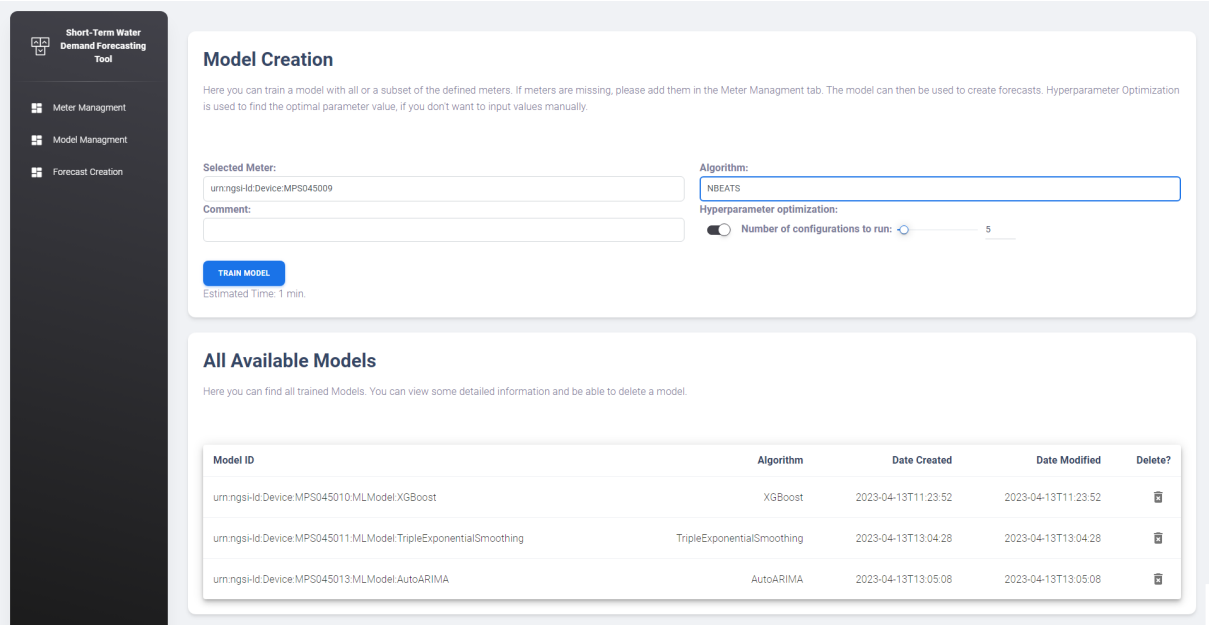
Product factsheet

Short-term demand forecasting tool

Software solution
Consulting or service offering (e.g. training)



Description

Two main components:

1. Backend service that allows to train models and create water demand predictions. The service is reachable through its own REST API (documented in OpenAPI), as well as through the Orion context broker (FIWARE).
2. Frontend service that is used to interact with the backend and visualize forecasts or model training results. This component is optional in case a frontend service already exists at the user's organization where the product can be integrated.

Training material for the short-term demand forecasting tool is available at https://youtu.be/6vR797OalnI.

Target audience

Water utility that has the software engineering capabilities to integrate the tool into their system. The user that interacts with / applies the tool needs to be able to use a browser and interpret data from the water domain (e.g., water demand line plots).

Actors, their roles and interactions

The tool is meant to be used by water utilities. Depending on their expertise, they might need help from external IT experts to integrate the tool into their system before it can be applied.

Unique selling points

The tool offers a wide variety of algorithms to create water demand forecasts, ranging from traditional, purely statistical methods to modern deep learning approaches. It is possible to automatically discover the best performing method for the specific use case or alternatively choose the method that the user has the most trust in already.

Technical requirements

Software engineering expertise to integrate the components (FIWARE components + backend + frontend) into the network and system of the water utility. All components are provided in form of docker containers. Additional expertise is required to install smart meter devices and connect them to the system such that the pre-processed smart meter data is accessible to the tool. The tool comes in form of docker containers and is thus independent of the specific OS.

Software data

- License: Open-source.

URL

https://github.com/iwwtech/bws-short-term-forecasting

Technology applied by the product

- **Water recovery technologies for water reuse**

Case Study applying the product

East Frisia, Germany

https://mp.watereurope.eu/d/CaseStudy/19

Related tags

Residential | Water demand | Industrial | Agricultural | Machine learning