

## FMH606 Master's Thesis

**Title:** Implementation of Intelligent User Interface for Open Source Software Configuration Library

**USN supervisor:** Hans-Petter Halvorsen

**External partner:** Equinor

### **Task background:**

The open source software configuration library [1] is a Python library used to create and validate configurations for internal software for both users and developers. It is written with being able to generate a user interface based on the resulting schema in mind, but this have yet to be done.

### **Task description:**

The task will be to develop an extension for the open source software configuration library with an intelligent context-aware user interface. See Figure 1.

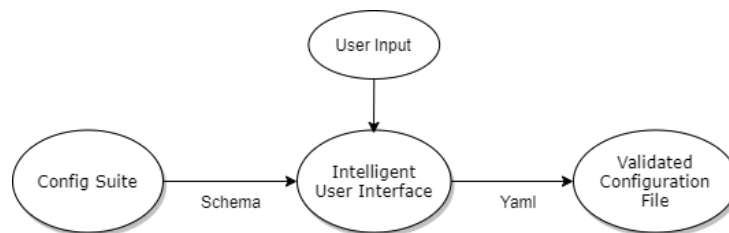


Figure 1: Open Source Software Configuration Library

In this project the following activities should be performed:

- Make an overview of general software configuration and its challenges
- Learn to use Config Suite and understand its inner workings
- Collect Config Suite user feedback and user stories
- Make an overview of Config Suite and how it solves the challenges of software configuration
- Learn the technologies which is to be used. Overview of given technology
- Theory and overview of intelligent user interfaces
- Theory and usage of a chosen software development process
- The main part of the project will be to implement an intelligent UI for Config Suite:
  - Source control
  - CI Pipeline
  - Testing
  - Make application configuration with config suite if applicable
  - Overview of UI design
  - Company design language and coding practices
- Documentation of implementation and results

**References:**

[1] Config Suite - <https://github.com/equinor/configsuite>

**Student category:** Reserved for IIA Online Student working at Equinor

**The task is suitable for online students (not present at the campus):** Yes

**Practical arrangements:**

All necessary software, equipment and access will be available. The project can be done from anywhere. Some meetings with external partner should be expected, but most meetings can be taken online using Microsoft Teams.

Equinor provides the necessary knowledge, resources and guidance.

Sensor: Equinor must provide a sensor used for the assessment of the final work. This person cannot be directly involved in the ongoing guidance/supervision of the student.

Open Access: All results of this project will be open for the public, meaning the results and report should be open access and will be public available on Internet and the results may be used in research and publications, etc.

**Supervision:**

As a general rule, the student is entitled to 15-20 hours of supervision. This includes necessary time for the supervisor to prepare for supervision meetings (reading material to be discussed, etc).

**Signatures:**

Supervisor (date and signature):

Student (write clearly in all capitalized letters):

Student (date and signature):