

We are a management consultancy with the ambition to play a significant role in the fields of systems engineering, project management, data & analytics and digitalization. We help world-leading companies in the field of future-oriented technologies to increase their performance and efficiency. In addition to economic optimization, we want to bring people together and develop them further - with a high degree of ambition and empathy.

We would like to deepen our expertise in the field of artificial intelligence applied to the domain of systems engineering and offer a cooperation in the context of the following thesis:

## BACHELOR- / MASTER THESIS

### Application of Machine Learning in Systems Engineering and Configuration Management

#### WHAT IS IT ABOUT?

Systems Engineering is an interdisciplinary field of engineering and technical management that deals with the design, integration and management of complex systems during their life cycle. Large amounts of data (e.g., technical drawings, parts lists, product structures) are generated as part of major shipbuilding projects. This data is processed, analyzed and presented with the help of common enterprise applications, enabling efficient control and management of the overall project. Configuration management plays an important role in this process. Many of the decisions made in this process are based on the experience and expertise of the employees. In the future, these decisions could be supported by a trained machine learning model, or could even be made independently.

#### THESE ARE YOUR TASKS:

- The goal of this thesis is to select and implement appropriate machine learning methods to support data-driven decision making in systems engineering and configuration management.
- In addition to literature research on the current state of the technology and best practice examples, the approaches developed will also be implemented in practice.
- The specific objectives can be further specified and adapted to the required scope of the work (Bachelor/Master) and the specific requirements of your university.

#### WHAT YOU BRING:

- High motivation and readiness to work
- Strong interest in data-driven modeling, systems engineering, and configuration management
- Knowledge of programming with Python and knowledge of relevant ML frameworks (TensorFlow, Sciki Learn, etc.)

#### WHAT WE OFFER YOU:

- Interesting practical insights into systems engineering, configuration and project management
- Personal mentoring and regular meetings to discuss questions and challenges
- Practical application of the developed approaches and methods of machine learning in a relevant industrial context
- Writing the paper is possible both in English and in German

## JOIN THE TEAM!

**Maxie Marcks will be happy to answer your questions (+49 (0) 4131 8848-02) and is looking forward to receiving your application by e-mail to [karriere@digitalsalt.de](mailto:karriere@digitalsalt.de).**

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