



## Bachelor Thesis / Master Thesis

### Start: from now

- Faculty 1 - Mathematics, Computer Science and Natural Sciences
- Faculty 4 - Mechanical Engineering
- Faculty 6 - Electrical Engineering and Information Technology

### Development of a machine learning-based method for the detection of anomalies in test bench systems

Anomaly detection (AD) is one of the core elements of predictive maintenance. The task of AD is to detect anomalies within monitored systems at an early stage and to inform the staff. In this thesis, an AD model for a real test bench is to be developed.

#### Your tasks:

- Literature research for machine learning-based methods for AD
- Evaluation and pre-processing of test bench data
- Development and evaluation of machine learning-based AD models
- Hyperparameter optimization

#### Your competences:

- Knowledge in machine learning
- Knowledge in python

#### Your benefits:

- Insights into field of application-oriented data science
- Potential publication opportunities

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