

You are a creative, committed person and want to gain hands-on experience alongside your studies? You want to learn about the interplay between research results and business applications?

Apply now!

The **Fraunhofer Institute for Applied Information Technology FIT** is looking for a

Master Thesis Student (M/F/D) in the field of Cyber-resilience for Smart Grids

Cyberattacks on the power system infrastructure can have wide-ranging consequences including but not limited to loss of life and property and blackouts. The digitalisation of power system introduces additional cyber-vulnerabilities in the power system.

The goal of this thesis is to present a methodology for evaluation of cyber-resilience of smart grids.

Your tasks include:

- Review of sensor-based anomaly detection and resilience assessment in the context of smart grids.
- Modelling of a detection evasive cyberattacks and power system contingencies for a specific smart grid use case such Electric Vehicle Charging.
- Integration of the attack model in an existing co-simulation environment.
- Evaluation of a resilience metric based on co-simulation results.

What you bring to the job:

- Good knowledge of Python programming and motivation to learn advanced Python, git and container orchestration software such as Kubernetes and Docker.

What we offer:

- A working atmosphere characterized by innovation and collegiality.
- Exciting projects that help you prepare for challenging future jobs.

Severely handicapped persons will be given preference in the case of equal aptitude. Fraunhofer-Gesellschaft attaches great importance to gender-neutral professional equality.

Interested? Then send your résumé (English or German) to:

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Find out more about us at <https://www.fit.fraunhofer.de/en.html>

