Fraunhofer FIT

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

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

Infrastructure resilience is defined by the National Infrastructure Advisory Council as 'the ability to reduce the magnitude and/or duration of disruptive events. The effectiveness of a resilient infrastructure or enterprise depends upon its ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event' [1].

Electric Power and Energy Systems are a part of the critical infrastructure that is faced with an increasing number of threats posed by High Impact Low Frequency (HILF) events such as extreme weather events and cyberattacks. The goal of thesis is to implement a simulation model for resilience assessment of smart grids.

Your tasks:

- Investigate existing power system resilience assessment frameworks.
- Model a N-2 contingency using simulation tools to assess power system resilience.

What you bring to the job:

- You are a student of electrical engineering with a background in energy engineering. You are interested in learning about cybersecurity topics.

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:

Charukeshi Joglekar
Charukeshi.mayuresh.joglekar@fit.fraunhofer.de
Find out more about us at https://www.fit.fraunhofer.de/en.html

References:

[1] A Framework for Establishing Critical Infrastructure Resilience Goals." https://www.dhs.gov/xlibrary/assets/niac/niac-a-framework-for-establishing-critical-infrastructure-resilience-goals-2010-10-19.pdf (accessed Jan. 26, 2023)