



Karlsruhe Institute of Technology



KIT | Institute AIFB | P.O. Box 6980 | 76049 Karlsruhe, Germany

To all interested students



**Institute of Applied Informatics
and Formal Description Methods**

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Student Research Assistant (HiWi)

Job Description:

The research assistants will support the scientific staff of the Systems, Data, Simulation & Energy (SYDSEN) research group. The SYDSEN research group concentrates on the use of data for providing decision support and enhancing energy efficiency, reliability and other performance metrics of cyber-physical systems, such as energy systems or smart manufacturing systems. In particular, our focus is on the development of new methods and approaches for data-driven modeling and simulation and its seamless integration with expert knowledge.

The tasks include:

- Developing simulation models and methodology for digital twins
- Literature review and replication of studies from literature
- Research and development in data-driven simulation
- Communication with project partners and demonstrators
- Implementing proofs of concept for the above tasks
- Documenting all tasks and outcomes

Qualifications and Skills:

We seek highly motivated Bachelor's or Master's students in computer science, industrial engineering, information sciences, or related fields, preferably at KIT.

- Proficiency in Python/Java for software development
- Basic understanding of IoT, Information Extraction, and Data Science
- Bonus: familiarity with modeling, simulation, digital twins, and manufacturing systems
- Strong communication skills for collaboration with diverse project partners
- Adequate English language proficiency for international teamwork.

We offer:

- A contract with 20-80h per month (the salary depends on the university degree). The contract can last between 2 and 6 months.
- Flexible working hours, also working at home possible.
- A variety of tasks so that you can learn a lot. Also state-of-the-art research can be performed and will be published together with the student.

How to apply:

Please send your application to lazarova-molnar@kit.edu with the following documents:

- Cover letter (0.25-0.5 pages): Why do you want to work on this topic? Why are you suitable for the position? (mention your interests and relevant skills).
- CV/Resume (max. 2 pages).
- Recent transcript of records / grading table.

Visitor Address:
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- Optional: Any relevant coding or project portfolio.

The payment is based on the rates of the state of Baden-Württemberg for academic assistants. The employment is temporary.