

We are currently searching for a

Student Assistant (HiWi): Learning Platform Development for Discrete Mathematics (Core Framework, 10h/week)

About us

We, the Chair of Electronic Design Automation at the School of Computation, Information and Technology of TUM, are developing a new web-based learning and practice platform to help students deepen their understanding of the core topics of our Discrete Mathematics for Engineers (DMI) course. Our plans for the platform include:

- Automatically generated exercise and exam-style tasks (e.g., Resolution Method, Warshall-Algorithm)
- Automatic checking of solutions or the generation of sample solutions
- Live in-lecture questions for activation and quick knowledge assessment, including visualization of the results for the lecturer.

Your work will focus on building the core system, ensuring an extensible and scalable architecture that will later enable seamless integration of additional exercise types and features, possibly including generative AI components.

Required Qualifications

- Solid programming skills in suitable programming languages (e.g., JavaScript/TypeScript, Python, ...)
- Experience with web frameworks or web application platforms
- Basic understanding of algorithms and data structures
- Ability to work both independently and in collaboration with another student
- Interest in building user-facing educational tools

Beneficial Qualifications

- Experience with full-stack development (frontend + backend)
- Familiarity with LaTeX (useful for task template generation)
- Experience with open-source development (Git, documentation workflows)
- Background knowledge in DMI topics (not absolutely required but helpful, experience from other courses on discrete mathematics or Boolean logic is also welcome)

Your Tasks

- Evaluate and set up a suitable framework to build the web application on
- Ensure modularity and extensibility for future task types
- Develop interactive task modules (both based on existing solvers, as well as new developments)
- Build intuitive solution-entry methods that allow for automatic checking of students' solutions
- Build an interface for live-quiz functionalities and lecturer dashboard

We offer

- A fixed-term "studentische Hilfskraft" position of 140 hours over the course of the summer semester 2026 (14 * 10h/week preferred, other arrangements can be negotiated)
- If desired, a follow-up contract for 90 hours over the course of the winter semester 2026/27 will be available
- The work can be carried out in-person or remotely

- TUM aims to increase the proportion of women; therefore, applications from women are expressly welcomed.
- The position is suitable for persons with severe disabilities. Applicants with severe disabilities will be given preference in hiring when they have essentially the same qualifications, aptitude, and professional performance as other candidates.
- In the context of your application for a position at the Technical University of Munich (TUM), you are transmitting personal data. Please take note of our data protection information pursuant to Article 13 of the General Data Protection Regulation (GDPR) regarding the collection and processing of personal data as part of your application: <https://portal.mytum.de/kompass/datenschutz/Bewerbung/>

By submitting your application, you confirm that you have taken note of TUM's data protection information.

Application

We look forward to your application. Please include your CV and Transcript of Records in an email to benedikt.schaible@tum.de

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