Student Assistant (HiWi) (m/f/d)

(Up to 86 h/month, Service Location: Clausthal-Zellerfeld)

The research group **D**ependable and **A**utonomous **C**yber-physical **S**ystems (DACS) at the **I**nstitute for **S**oftware and **S**ystems **E**ngineering (ISSE), Clausthal University of Technology (TU Clausthal), is looking for a

Student Assistant in the field of Software Engineering for Dependable AI-Based Automated Driving Systems with Autoware

(at our location in **Clausthal-Zellerfeld**)



The position is available immediately. The exact number of working hours per month can be agreed individually (maximal **up to 80 h/month**).

With these positions, we invite YOU to join our team, which is working in close collaboration on the **development of our real AI-based automated shuttle** (see image) using the **Autoware-stack** for **deployment on public roads**.

The **I**nstitute for **S**oftware and **S**ystems **E**ngineering (ISSE) is one of the two computer science institutes at TU Clausthal, hosting several research groups. For more information about the ISSE Institute, please visit our website: https://www.isse.tu-clausthal.de/.

As a student assistant, you will actively contribute to the **software development, integration, testing, and operation of our automated shuttle**. In addition to software-development tasks, you will support real-world vehicle tests and act as a **test/safety driver** during selected test activities.

Your responsibilities include:

- Support in the **development and implementation of software components** in a Scrum-based agile team (together with PhD-candidates) for our Autoware-based automated driving system.
- **Integration, configuration, and adaptation of software components** within our ROS2-basedAutoware software architecture.
- **Development, testing, and evaluation of methods and software systems directly on our real test vehicles** (see image) for automated driving.
- Implementation of software prototypes and supporting tools using **Python and/or C++**.
- Testing, debugging, and evaluation of software components in simulation environments and on our **real automated shuttle**.
- Support in the development and execution of **software and system test procedures**.

- Analysis of system behavior, log data, test results, and software failures during automated-driving experiments.
- Application of modern software-engineering approaches such as **Git-based development, CI/CD, software testing, issue tracking, and modular software architectures**.
- Preparation and documentation of vehicle tests, including test scenarios, configurations, observations, and results.
- Participation in real-world test drives with our automated shuttle.
- Acting as a **test/safety driver during vehicle testing**, including monitoring the vehicle and system behavior and intervening when necessary.
- Support in the preparation and operation of the research vehicle before and during test campaigns.

Your profile:

- You are currently enrolled in a **Bachelor's or Master's degree program** in Computer Science, Software Engineering, Robotics, Electrical Engineering, Automotive Engineering, or a related field.
- Good programming skills in **Python and/or C++**.
- Basic knowledge of software engineering, including software development, testing, and debugging.
- Strong interest in **automated driving, robotics, ROS 2, and complex software systems**.
- Experience with common software-development tools such as **Git and IDEs**, or willingness to familiarize yourself with them.
- An independent, structured, reliable, and safety-conscious way of working.
- Willingness to participate regularly in **vehicle tests and experimental test drives**.
- A **Category B driving license valid for driving in Germany**.
- Good German and English language skills, both written and spoken.

Desirable qualifications:

Experience in one or more of the following areas is advantageous but not required:

- **ROS 2**
- **Autoware**
- Linux
- Docker
- C++ and Python development
- Software testing and test automation
- CI/CD
- Automotive or robotic software systems
- Automated-driving systems
- Vehicle testing
- Sensor systems such as camera, radar, or LiDAR
- Data logging and analysis
- Simulation environments
- Model-based development
- Scrum or other agile software-development methods.

We offer:

- A family-friendly, collegial working environment in dedicated teams as well as interdisciplinary and varied tasks.
- The opportunity not only to **develop innovative software engineering approaches** but also to practically **test them directly on real test vehicles** – from first simulation to real-world driving.
- An innovative working environment with modern laboratories and simulation environments, as well as direct access to a **real automated shuttle** used as a **test platform for research and development**.
- The opportunity to directly apply and evaluate your results in industrial projects.
- Flexible working hours and the option of remote work.
- A Lounge Lab, table soccer, and social events.
- Regular training and further education opportunities.

The remuneration is based on the applicable regulations for student assistants at TU Clausthal.

TU Clausthal supports work-life balance through flexible working time models within the framework of official possibilities and is a member of the "Family in the University" association.

Equality, encompassing equal opportunities, diversity, and family-friendliness, is an important concern for TU Clausthal. People with disabilities are given priority consideration if appropriately qualified. Applications from individuals of all nationalities are welcome.

Please submit your application with the usual documents (including at least your CV, master's degree certificates, and master's transcript of grades) via email (in a single PDF file) to Mr. Kumthekar (kunal.jayant.kumthekar@tu-clausthal.de).

If you have any questions, feel free to contact us.

We look forward to having you on board!

Please note our data protection information in the application process at https://www.tu-clausthal.de/universitaet/karriere-ausbildung/stellenangebote/hinweise-zum-datenschutz-im-bewerbungsverfahren.

Application costs cannot be reimbursed. Your application documents will be destroyed in compliance with legal regulations after the completion of the selection process.