



**More undercover,
less underchallenged.**

Shift how the world of tomorrow moves.
Develop technologies and solutions for
mobility with around 8,000 colleagues
across the globe.

Job-ID: 21435

Thesis - Development of an AI tool for the automated design of thermal management systems

 Munich / Ingolstadt / Berlin / Wrocław / Opole

The worldwide transformation to e-mobility is happening right now - and we contribute to shape it! Would you like to help us solve the exciting challenges that this change entails and turn innovative ideas into reality? For making e-mobility real, the e-machine must be controlled precisely, efficiently, and robustly. For this, we develop software functions, which go beyond the state of the art. You will have the opportunity to support us in this intention and thus contribute to the mobility of tomorrow.

Your tasks:

The thermal management system in electric vehicles requires a complex design process due to the specific component requirements. To master the high number of degrees of freedom of this process, we are developing a design tool in the "Thermal System Development" team that automatically determines the hardware-side interconnection of the individual components and the software-side operating strategy. For the further development of the tool, we are looking for independent students with first programming experience. If the cooperation is positive, there is a chance of a permanent position at IAV.

Your Tasks:

- Familiarization with the existing tool with analysis of strengths and challenges.
- Evaluation and further development of the methodological concept.
- Development and integration of new functions and evaluation algorithms.
- Optimization of simulation interfaces between frontend, backend and simulation.
- Design and implementation of AI approaches for process acceleration.

Your skills:

Necessary Skills:

- Ongoing studies in computer science, electrical engineering, mechanical engineering, automotive engineering or comparable field of study.
- First knowledge in the field of optimization and artificial intelligence.
- First programming experience (e.g. in Python).
- Independent way of working with a creative approach.

Desired Skills:

- Basic knowledge of heat transfer.
- Good knowledge of German and English.
- Experience in the automotive environment.

Apply now!
apply-poland@iav.de

Have you still got questions?
Please contact us.



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Our offer:

As a student, you won't be working just anywhere at IAV, but in the thick of it. On real projects. On exciting future tasks. Fully integrated and in close collaboration with IAV experts. With lots of responsibility and at the same time ample freedom so you can manage your work and studies: resulting in the best perspectives for your professional development and attractive. Diversity and equal opportunity are important to us. We care about the person as well as individual strengths and character.

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