



STUDENT ASSISTANT (M/F/D) – PROCESS OPTIMIZATION

fortiss is the research institute of the Free State of Bavaria for the development of software-intensive systems with headquarters in Munich. The scientists at the institute cooperate in research, development and transfer projects with universities and technology companies in Bavaria, Germany and Europe. The focus is on research into state-of-the-art methods, techniques and tools for the development of software- and AI-based technologies for dependable, secure cyber-physical systems such as the Internet of Things (IoT). fortiss is organized in the legal form of a non-profit limited liability company. Shareholders are the Free State of Bavaria (majority shareholder) and the Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. www.fortiss.org

At the Machine Learning competence field, we are focusing on mathematical modelling of challenging real world problems in various application domains. Our partners range from local small and medium-sized companies to global corporations. We are currently working together with a Bavarian manufacturing company that specializes in the manufacture of cutting tools for industrial applications. New technologies and processes are required to keep the use of materials as low as possible while at the same time increasing productivity. The use of mathematical optimization methods plays a central role in this and will be investigated within the scope of this project.

Your tasks:

- Conduct a literature survey to identify possible solution strategies for optimal path planning under consideration of material constraints
- Review existing approaches in terms of their applicability to the problem
- Implementation and evaluation of software prototypes

Your profile:

- You are currently enrolled as a master student (Electrical Engineering/Computer Science or related departments)
- Knowledge and practical experience in the mathematical modeling of optimization problems
- Basic knowledge in genetic and evolutionary algorithms is a plus
- Excellent communication skills in English, basic skills in German is a plus

Our offer:

- A three-month HiWi contract with payment
- Preferably 2-3 days a week (15-20h per week)
- Working within an exciting international and dynamic research environment
- Immediate support from experienced researchers

Did we catch your interest?

Please submit your application with a motivational statement, a detailed CV and a current transcript of records to Julian Wörmann, woermann@fortiss.org