Our team is currently looking for two research assistants working full-time on the topic

**Efficient planning of available hardware resources for an optimal execution of machine learning algorithms in the context of autonomous driving**

**Your Task**
The goal of the project “Reconfigurable hardware platform for AI-based sensor signal processing in autonomous driving” (KI-FLEX) is the development of a novel and highly flexible hardware platform including a software framework for KI-based sensor signal processing and fusion in autonomous vehicles. In this project, suitable methods and tools will be developed to ensure the functional safety of the AI algorithms and their interaction in the application and the planned hardware-software-system even during reconfiguration while driving. Your main task is to design and implement an efficient scheduler for the project. This task includes:

- Requirement analysis for the scheduler
- Design and conception of the scheduler architecture
- Developing a testing environment
- Implementing the scheduler including testing and optimizing the developed scheduler
- Integration of the developed components in a final system demonstrator

**Requirements**
- Excellent master’s degree in Computer Science or Electrical Engineering
- Good knowledge of basic concepts and the current state of the art of embedded scheduling concepts
- Professional proficiency in C/C++ and high interest in embedded software engineering and development
- Experience in FPGA and Microcontroller programming
- Excellent writing skills and a self-reliant well-organized style of working are essential
- High motivation, strong communications skills and high team spirit
- Language: Both German and English are required

**What We Offer**
- **Opportunity to obtain a PhD**
- Employment as a research assistant (TVL-E13) in a fulltime position (fixed-term contract)
- Close collaboration with German companies in the automotive domain
- An open and innovative working environment at one of Europe’s top universities
- Working in a diverse research group in embedded systems and robotics with topics ranging from autonomous driving to brain-inspired technologies

**About Us**
The Technical University of Munich (TUM) is one of the largest and in terms of third party funding one of the most successful universities in Germany. It is consistently ranked among the best universities in the world and is appointed as one of only three top-level elite universities by the German National Science Foundation since 2006. TUM as an entrepreneurial university actively supports knowledge transfer with over 300 start-ups created over the last years, numerous partnerships with industry and a comprehensive set of services aimed at successful commercialization of research. The Chair of Robotics, Artificial Intelligence and Real-time Systems led by Prof. Alois Knoll performs research in fields of human robot interaction and service robotics, medical robotics, cognitive robotics and cyber-physical systems. Across all these areas, there is a strong focus on the development and application of AI-based methods ranging from traditional machine learning to brain-inspired methods and neuromorphic computing.
Application
We are looking forward to receiving your application. The earliest starting date is **August 1, 2019**. Applications will be considered as long as the position is open and should include:

- A letter of motivation that describes your professional experience, your interest in the topic and why you think that you are a good fit for the topic and our team
- A detailed up-to-date CV that includes completed projects and publications
- Transcripts of record of your Bachelor’s and Master’s degree
- Names and e-mail addresses of at least two professors that can provide letters of recommendation on request

Please submit all documents in a single PDF via e-mail to morteza.hashemi@tum.de. Use the subject “KI-FLEX Recruitment”. Alternatively, you can submit the documents by mail to the address below.

TUM has been pursuing the strategic goal of substantially increasing the diversity of its staff. As an equal opportunity and affirmative action employer, TUM explicitly encourages nominations of and applications from women as well as from all others who would bring additional diversity dimensions to the university’s research and teaching strategies. Preference will be given to disabled candidates with equal qualifications.

Contact
Technische Universität München
Institut für Informatik VI
Morteza Hashemi Farzaneh, M.Sc.
Boltzmannstraße 3
85748 Garching bei München
Tel. +49 89 289 18139
morteza.hashemi@tum.de
www6.in.tum.de
www.tum.de

Data Protection Information
When you apply for a position with the Technical University of Munich (TUM), you are submitting personal information. With regard to personal information, please take note of the Datenschutzhinweise gemäß Art. 13 Datenschutz-Grundverordnung (DSGVO) zur Erhebung und Verarbeitung von personenbezogenen Daten im Rahmen Ihrer Bewerbung (data protection information on collecting and processing personal data contained in your application in accordance with Art. 13 of the General Data Protection Regulation (GDPR)). By submitting your application, you confirm that you have acknowledged the above data protection information of TUM.