Research Assistant and PhD Candidate in Traffic Environment Perception using Multi-Modal Sensors

Are you passionate about machine-learning based systems for traffic environment perception? Do the challenges of precision, time-criticality, resource, and energy demand of AI based solutions excite you? Do you want to set the tone for future mobility systems with your creative ideas and solutions? We might just have an interesting position for you as a research assistant and specialist in multi-modal environment perception.

The Chair of Robotics, Artificial Intelligence and Real-Time Systems operates a state-of-art research infrastructure for intelligent transportation systems and infrastructure-assisted autonomous driving on the A9 autobahn and the adjacent urban areas of Garching-Hochbrück near Munich. The test-field and the research infrastructure provide on the one hand permanent access to real-world data and on the other hand the opportunity to experiment, deploy and test the created solutions live and 24/7.

Your responsibilities

1. High quality research in the field of high precision environment perception using multi-modal sensors
2. Regular publication of results in high-impact and peer-reviewed journals and conferences
3. Ownership of the deployment architecture and computational resource allocation for the live test bed infrastructure covering the AI-toolchain, OS, and the middleware
4. Participation in research projects, execution of project deliverables and generation of reports
5. Supervision of student thesis, and participation in periodic academic assignments at the chair
6. Assistance and active participation in the drafting of research proposals

What we look for in you

1. Master's degree completed in computer science or engineering
2. Proficiency in both written and spoken German to create project reports and participate at project meetings
3. In-depth knowledge of machine-learning based approaches in theory and practice
4. Strong programming skills in C++ and Python, and experience with machine-learning frameworks
5. Working knowledge of Linux and a basic understanding of network administration
6. Exposure to containerized deployment and open-source middleware (e.g. ROS1 and ROS2)
7. Ability to work independently, willingness to learn and acquire new competence

What we offer

1. A friendly and open work atmosphere, and best-in-class research infrastructure.
2. Participation in high-impact and visionary research projects
3. Unparalleled access to real-world data for your research
4. A network of renowned companies and research institutes as part of project consortia
5. An opportunity to make a visible impact, earn a doctorate degree and much more!

The employment will be as per TV-L E13 on a fixed term contractual basis. The Chair of Robotics, AI and Real-Time Systems at TU Munich strives to increase the proportion of women employees and therefore strongly encourages relevantly qualified women to apply. Severely disabled persons are given preference upon equal suitability and qualification.

Your application

Please send your application consisting of a **motivation letter, curriculum vitae, copies of your degrees and transcripts, employment certificates** and any other relevant documents - all **combined into one pdf file not exceeding 10MB** in size - to the email addresses xingcheng.zhou@tum.de and leah.strand@tum.de latest by **23rd February 2024**. Please use the text **Application RA_ITS_202402_A** in the subject field of the email and provide your **expected earliest starting date**. Personal information submitted as part of your application will be in accordance with Art. 13 of GDPR. Please check this link for the details.