RESEARCH INTERNSHIP IN DATA-CENTRIC REINFORCEMENT LEARNING (M/F/D)

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

We are looking for Master students who would like to complete her/his research internship in our research project "KI-Wissen" in autonomous driving where we aim at improving the performance of the reinforcement-learning-based behavior planner via data-centric approaches. An in-house developed semantic simulator BARK is to be used.

Your tasks:

Literature research and implementation in one of the following topics:

- Automatic scenario generation using evolutionary algorithms or DNN
- Traffic rule compliance for synthetic critical scenarios
- Optimal mixture of real-world & synthetic data in reinforcement learning for behavior planning
- Adversarial environment generation to train reinforcement learning agent

Your profile:

- Master student currently enrolled in Electrical and Computer Engineering TUM.
- Practical experience in programming languages such as Python or C++.
- Knowledge in simulation, reinforcement learning or behavior planning is a plus.
- Excellent communication skills in English.
- Nice to have experience with TensorFlow or PyTorch

Our offer:

- An international and dynamic work environment with highly qualified colleagues.
- Experience with real-world applications on automated vehicle.
- Flexible working conditions, e.g., home office, flexible working hours.
- Continuing Master's thesis on the above topics is very welcome.

Please submit your application with a detailed CV and a current transcript of records.

Contact for details or direct application: Xiangzhong Liu, xliu@fortiss.org

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