Student Research Assistant (HiWi)

Our autonomous test vehicle (left), CARLA simulator (right)

Development of an Interface between our Autonomous Driving Stack and the CARLA Simulator

As an institute, we are collectively and continuously working on a software stack to drive our autonomous test vehicles. Being able to simulate the drive offline is essential to validate newly developed features and fixes and to test the performance and reliability of our system.

There are a number of possible simulation environments that could be used for this task. One such tool that is widespread throughout the research community is the CARLA simulator. It is open-source and highly customizable allowing it to be used for many scenarios.

We are looking for a student assistant to help us develop and implement an interface between our software stack and the CARLA simulator.

The proposed position consists of the following parts:

+ Analyze the interface requirements between our autonomous vehicle pipeline and the CARLA Simulator
+ Develop a robust and efficient interface for seamless communication between both systems
+ Conduct tests and validations to ensure the functionality and performance of the interface

I am happy to answer any questions you might have. Feel free to ask for an appointment or directly ask at my office!

Institute of Measurement and Control Systems (MRT)
Prof. Dr.-Ing. Christoph Stiller

Advisor:
Nick Le Large, M.Sc.

Programming language(s)[1]:
C++   advanced
Python   advanced

System, Framework(s):
Linux, ROS, git

Required skills:
- Independent and structured work approach
- Interest in autonomous vehicle technologies and simulation environments

Language(s):
German, English

For more information please contact:

Nick Le Large

Room: 234
Phone: +49 721 608-43794
Email: nick.lelarge@kit.edu

Or directly send in your application including your current grades as well as our questionnaire!

[1] **skill levels:**
beginner   < 500 lines of code (LOC)
advanced   500 – 5000 LOC
proficient > 5000 LOC