Evaluating Metrics for Performance Assessment in Autonomous Driving

Bachelor Thesis
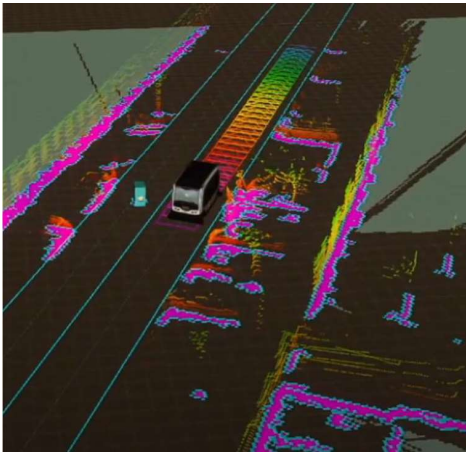
The scope of the thesis can be adapted individually.

Autonomous Driving   **Machine Learning**   **Safety**

Metrics play a crucial role in evaluating the performance of autonomous driving systems and their underlying components. They serve as a means of measuring the effectiveness and efficiency of these systems, especially in critical scenarios. They provide a common language for comparing the performance of different autonomous driving systems, allowing for objective and systematic evaluations of their strengths and weaknesses. Therefore, it is crucial to focus on evaluating and improving metrics used for performance assessment in autonomous driving.

Dosovitskiy et al.: CARLA (2017)

The Topic

- You will perform state-of-the-art research on metrics for autonomous driving

- You will determine strengths and weaknesses of current metrics

- You will evaluate and improve metrics for performance assessment in autonomous driving

- You will evaluate the performance of new metrics in simulation, on real-world data or directly on our shuttle busses

What We Offer

- Exciting insights into our research and valuable practical experience

- Lates hardware and software for your work

- Regular support and feedback

Your Skills

- You study Computer Science or a related field

- You are interested in machine learning and deep learning, as well as autonomous driving

- You have experience in Python, ROS and Linux

- You show an above-average level of initiative and responsibility

How To Apply

- Start: Immediately

- Write me an email at schotschneider@fzi.de with your CV and a few sentences why you are interested and why you are a good fit.

- After acceptance, we will set up a first meeting to discuss the details and to form the topic to your needs.

FZI Research Center of Technology | Research Division Technical Cognitive Systems
Albert Schotschneider, M. Sc. | E-Mail: schotschneider@fzi.de | Phone: +49 721 9654-391