

Student thesis



Bachelor / Master thesis

Calculation of Performance Indicators for Technical Assessment of Urban Driving Automation

Topic and Goal of the Thesis

A key step on the road to highly automated driving is the analysis of the behavior of automated vehicles and their interaction with other road users. Urban applications pose a particular challenge.

Performance indicators for characterizing the interaction of road users in urban areas are typically calculated using data from external sensors. However, advances in the environmental perception of automated vehicles open up the potential to determine performance indicators directly based on vehicle data. For this purpose, it is to be investigated in this thesis whether and which parameters can also be determined from data from the vehicle perspective.

Working Points

- Literature research on performance indicators used to characterize interactions in urban environments
- Development of algorithms that determine performance indicators based on vehicle sensor data
- Comparison of calculated indicators with indicators from external reference data (e.g. drones)

Requirements

- Good English or German language skills
- Reliability, commitment and enjoyment of working independently
- Experience with Python or Matlab
- Experience with Linux and ROS is an advantage (not a must)

Department

Vehicle Intelligence & Automated Driving

Contact



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Language

German or English

Entry Date

Earliest possible date

Prior knowledge

Python