

Student thesis



Master's thesis

Conception of a model for semantic linking of environmental data

Topic and Goal of the Thesis

Conventional approaches for environmental modelling are based on the separate recognition, evaluation and fusion of objects of different categories (e.g. vehicles, lane markings, road signs, etc.). Using these approaches, the semantic relations between the recognized objects, for example the assignment of road signs to certain lanes, are often not considered. However, many of these relations provide important information for the actual driving function. The aim of this thesis is therefore to develop a concept for semantic linking of objects of different categories to represent the recorded driving scene holistically, to increase the informational content of individual objects and to check the plausibility of information.

Working Points

- Elaboration of basic approaches for semantic environment modelling
- Development of a concept for semantic linking of objects of different categories
- Exemplary implementation of the concept based on real driving data and defined scenarios

Requirements

- Very good English or German language skills
- Reliability, commitment and enjoyment of working independently
- Creativity and the ability to abstract situations
- Basic programming skills in C/C++ or Python

Department

Automated Driving

Contact



Fabian Kuzaj, M.Sc.

+49 241 80 25614

fabian.kuzaj@ika.rwth-aachen.de

Language

German or English

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Prior knowledge

Basic Knowledge about Automated Driving, Sensors and Environment Modelling