



Internal Communication of Autonomous Vehicles

BA & MA Thesis Topic Areas

Background

Highly automated vehicles are about to be introduced at least for some use cases. Such vehicles will then become actors in socio-technical systems. People will be able to do a whole range of other occupations such as reading, sleeping, working, or watching TV.

Information Needs in Automated Vehicles

Research Goal

The aim of this thesis is to investigate which information needs there are in the case of highly automated driving when no actual involvement of the human driver is needed. A related work research should be conducted and interdisciplinary, learning psychological, didactic and information science approaches should be considered.

A prototype should be designed and implemented that investigates several of these aspects. Finally, the defined hypothesis should be evaluated by conducting a study.

Calibrated Trust via Visualization of Vehicle's Perception

Research Goal

The aim of this thesis is to investigate whether the trust in an autonomous vehicle can be increased or calibrated with various types of visualization. For this, current neural network visualizations (e.g., semantic labelling, see picture below) could be displayed to a user.

A prototype should be designed in VR to test the defined hypothesis in a user study.

