External 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 involving pedestrians and other human drivers where some communication will be necessary.

**Aiding People with Visual Impairments**

**Research Goal**

The aim of this thesis is to investigate how to aid people with visual impairments in future traffic with the possibilities arising with autonomous vehicles. A related work research should be conducted. A prototype should be designed and implemented that investigates several of these aspects. Finally, the defined hypothesis should be evaluated by conducting a study.

**Aiding Deafblinded People**

**Research Goal**

The aim of this thesis is to investigate how to aid people with deafblindedness in future traffic with the possibilities arising with autonomous vehicles. A related work research should be conducted. A prototype should be designed and implemented that investigates several of these aspects. Finally, the defined hypothesis should be evaluated by conducting a study.

**Aiding People with Visual Impairments**

**Research Goal**

The aim of this thesis is to investigate how to aid people with visual impairments in futuristic autonomous taxis. For this, requirements have to be defined and a prototype should be implemented (in VR or as a mocked hardware setup) and a user study should be conducted.