Talk to Me: Voice User Interfaces in Highly Automated Vehicles for People Who Are Visually Impaired

Open Bachelor/Master Thesis

Background

Automotive user interfaces are sometimes hard to comprehend and learn especially for people with visual impairments. Voice assistance and screen readers however are technologies that have been proven beneficial to a variety of users including users who visual impaired. In recent years, autonomous driving technology has advanced significantly and become a reality. This technology is particularly advantageous for people who are blind or visually impaired, as it provides them with a measure of independence and freedom. The question arises how and if these technologies can or should be applied in the context of an autonomous vehicle in order to be able to find, understand and use all buttons, screens, sliders and functionalities.
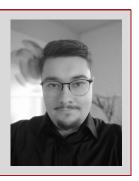
Research Goal

The aim of this thesis is to build different prototypes that cover different types of Speech interfaces and assistance systems. In a workshop or study these prototypes shall be discussed and evaluated by people who are visually impaired.

Based on bachelor/master level the scope is adapted.

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