Implicit Interaction Concepts for Highly Automated Vehicles

Open Bachelor/Master Thesis

Background and Research Goal

The inclusion of in-vehicle sensors and increased intention and state recognition capabilities enable implicit in-vehicle interaction. Thus, driver drowsiness, stress, fatigue, or distraction can be recognized which can lead to safer driving. With higher SAE level, however, the focus of interaction shifts from enabling a safe driver state to enhancing trust towards the vehicle, acceptance, and user experience.

Hence, the aim of this work is to design new implicit in-vehicle interaction concepts for HAVs, addressing this focus. These concepts should be implemented with Unity (in a driving simulator or VR environment). Subsequently, a user study should be conducted to evaluate whether those concepts have a positive influence on passengers' trust, acceptance, and user experience in HAVs.

Based on bachelor/master level the scope is adapted.

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Images:

https://www.ednasia.com/ai-starts-to-gain-emotional-intelligence/
https://www.nexible.at/blog/artikel/auf-dem-weg-zum-autonomen-fahren-kuenstliche-intelligenz-im-auto/