Bachelorarbeit, Masterarbeit

Comparison of rule-based and formula-based decision making models for unsignalized intersections

Motivation
With the introduction of automated vehicles on public roads, there will be a number of challenges that need to be solved to ensure safe and smooth traffic management. For example, there will be an increasing number of situations in which automated vehicles will have to interact with human drivers. In order to make this interaction as intuitive as possible for human drivers, the aim is to design the behavior of the automated vehicle to be similar to that of the human driver. To achieve this, the vehicle's behavior generation must first be able to interpret the behavior of human road users in order to make a decision about its own behavior based on this.

Task description
In this thesis, a rule-based model should be compared with a formula-driven model. To do this, a further model is required in the simulation environment based on the model that has already been implemented. The published GIDM model must first be implemented in the existing simulation environment before a comparison between the two models is possible. The metrics presented in the publication will be used to compare the two models in different scenarios and to work out the respective advantages and disadvantages.

Preknowledge
- Basic knowledge of signal processing
- Experience in Python
- Enjoyment of scientific work

Subject
- Automated driving
- Signal processing

Studiengang
- Elektro- und Informationstechnik
- Informatik

Ausrichtung
- Implementierung
- Signalanalyse
- Recherche

Start
Ab sofort

Links
Forschungsprojekt
Mitarbeiter

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