

Analysis and Evaluation of Real-time Operating Systems for Autonomous Vehicles

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Bachelor Thesis, Master Thesis

The development of intelligent and safe cars is a challenge. This also applies to operating systems that will be used in future cars. Selecting an operating system for vehicles is a very important task, as they must control core vehicle functions and meet safety requirements. The aim of Real-time Operating Systems (RTOS) is to guarantee deterministic behavior that enables the design and development of complex safety-critical applications.

In this thesis, you will study the existing RTOS technologies and perform a systematic analysis and evaluation. You will then implement an HTML-based tool with filtering and classification functions that presents the results of your work.

Tasks

- Preparation of a comprehensive list of existing RTOS technologies (1 month)
- Analysis and evaluation concept (1 month)
- Implementation of the HTML-based comparison tool (1month)

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