Master Thesis

Concept development for Rust as an Alternative to Current Setup in the Embedded Software Development at Volkswagen Infotainment

Fachhochschule

Motivation:

Volkswagen Infotainment is developing the platform for digital and IoT services within the Volkswagen group. Thereby several ECUs as well as variants for different brands with their cars need to be considered.

Volkswagen Infotainment is interested in new technologies to optimize their development approach. In this case Rust could be an technology alternative for development of software for ECUs. In this thesis a concept should be developed to give decision support and insights on the impacts if and what a change from the current would mean for the organization.

Several general conditions need to be taken into account by this concept, which lead to the following tasks:

Tasks:

- Impact of ASPICE approach at VW Infotainment to the concept
- Evaluation Coding standards for Rust (e. g. MISRA)
- Comparison of Development process with Rust to current approach
- Definition and evaluation of performance Key Performance Indicators concerning performance and memory usage in comparison to current approach

Requirements:

- Master Thesis for students of Digital Technologies or Systems Engineering & Engineering Management
- Knowledge on embedded Software Development (with C++ and/or Rust) is beneficial

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VOLKSWAGEN

INFOTAINMENT

Wir geben Impulse

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