

## Open Thesis / Project:

# C Program Static Analysis

### Motivation & Summary

Embedded automotive software requires high dependability. To achieve it, functional and non-functional requirements must be satisfied. We specify non-functional requirements of software. However, we lack in checking compliance with these non-functional requirements.

The motivation of this work is to **develop LLVM passes** to automatically extract non-functional properties and compare these properties to non-functional requirements.

### Thesis Type

- IT-Project / Project / Seminar
- BSc Thesis
- Master Thesis

### Goals and Tasks

- Explore LLVM pass development framework
- Write multiple LLVM passes to automatically analyze different non-functional properties of C program.

### Recommended Prior Knowledge

- C++ Concepts
- Compiler Construction
- LLVM



### Contact & Information

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