SCIENCE ▪ PASSION ▪ TECHNOLOGY

TU Graz

Open Thesis / Project:

Design Space Exploration

Motivation & Summary

To ensure portability and complexity in the real-time system often the layered development approach is used. In the layered system development approach, we have an Application Software (ASW) layer to provide application functionality and a Basic Software (BSW) layer that provides the abstraction between application software and the hardware platform through a number of services, e.g., real-time Operating System (OS), hardware drivers, etc.

The motivation of this work is to use evolutionary techniques to autogenerate the configuration of BSW such that ASW's multiple non-functional requirements of the system are simultaneously met.

Thesis Type

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

Goals and Tasks

- Explore a set of evolutionary techniques to find feasible solutions.
- Development of Python Utility for requirement selection and results visualization.

Recommended Prior Knowledge

- Python
- Real-time operating systems
- Evolutionary techniques

AUTOSAR

Contact & Information

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