Master thesis – Automatic Source Code Optimization (ADAS)

Description

For the area of embedded systems and software development (located in Lindau, Riemerling (near Munich) or Ulm), we are looking for a masters student (m/f/diverse) to write a masters thesis (hybrid or remote) starting immediately in February 2022 for at least 8 months.

Your tasks will be:

- Develop algorithms to automatically optimize source code
- Specify, evaluate, and extend methods for the analysis of source code written in C to optimize it regarding runtime and memory consumption
- Design and implement algorithms to automatically generate optimized source code
- Integration of the developed algorithms into a toolchain written in Python
- Validation of the implemented algorithms and tools on C source code of an ADAS embedded system and adaptation to the requirements of the SW developers

Qualifications

- Student of Computer Sciences or Mathematics, Physics, Engineering with very strong background in computer science, or related studyprograms
- Extensive theoretical and practical experience in compiler construction (including algorithms for lexical, syntax, and semantic analysis and for intermediate code generation and relevant tools) and source code optimization
- Excellent knowledge in ANSI C and Python programming and debugging
- Strong background in algorithms and data structures
- Enthusiasm for developing robust and reliable tools in the automotive industry
- Interest in embedded system SW development for safety critical applications in the automotive industry
- Very good German and English language skills - written and spoken
- Commitment, systematic working methods, organizational talent, good team- and communication skills

Please remember to upload your current enrollment certificate as well as your current overview of grades and conditions of study, as these are absolutely necessary for the processing of your application!

Applications from severely handicapped people are welcome.

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2020, Continental generated sales of €37.7 billion and currently employs more than 192,000 people in 58 countries and markets. On October 8, 2021, the company celebrated its 150th anniversary. The Autonomous Mobility and Safety business area develops, produces and integrates active and

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Keyfacts

Job-ID
208727BR

Function
Engineering

Location
Lindau am Bodensee

Leadership Level
Leading Self

Job Flexibility

Hybrid Job
Hybrid Job – You work both mobile and on the company site

Contact

Your contact partner
Inez Kruse

Benefits

Retirement benefits
Wellness (Massage)
Sports/Fitness programs
Healthcare services
Employee-Events
Referral program
Canteen
Meal allowance

passive safety technologies and controls vehicle dynamics. The product portfolio ranges from electronic and hydraulic brake and chassis control systems to sensors, advanced driver assistance systems, airbag electronics and sensors, electronic air suspension systems and cleaning systems for windscreens and headlights. Autonomous Mobility and Safety has a high level of systems expertise in the interconnectivity of individual components. As a result, products and system functions are created along the “SensePlanAct” chain of effects. These make driving safer and easier and pave the way for autonomous mobility.