

Markus Heimerl

Embedded Systems Engineer

Contact

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Technical Skills

Programming

C, Python, HDLs

Architectures

ARM, RISC-V

Signal Processing

State Space Model, Kalman Filter

Hardware

PCB, FPGA

Protocols

SPI, CAN, ETH, TCP/IP

Languages

German

Native Speaker

English

C1 Level (TOEFL iBT 105/120)

Courses

Biomolecules and Cell

University of Tübingen (2023)

Data Literacy

University of Tübingen (2023)

Advanced Parallel Computing

University of Hagen (2024)

Professional Summary

Embedded Systems Engineer with strong background in signal processing, bare-metal firmware development, and hardware-software co-design.

Professional Experience

Software Developer

May 2024 - Present

intive GmbH, Regensburg

Developing a diagnostic and visualization tool for electronic control unit networks

Software Development Engineer

Jul 2023 - Dec 2023

Vector Informatik GmbH, Regensburg

Contributed to bootloader development for microcontrollers with over-the-air capabilities

Digital Design Teaching Assistant

Mar 2022 - Sep 2022

Regensburg University of Applied Sciences

Supported students in digital design course and evaluated exercise sheets

Technical Projects

Autonomous Flight Control and Navigation System

2021 - Present

github.com/markusheimerl/quad

Autonomous quadcopter with custom PCB, bare-metal firmware, and control model

Education

B.Sc. Computer Engineering

2018 - 2022

Regensburg University of Applied Sciences

Embedded Systems, Signal Processing, Real-Time Control, Computer Architecture

Volunteering

Event Organizer

Mar 2019 - Aug 2019

TEDxOTHRegensburg

- Implemented online ticketing system for seamless attendee experience
- Recruited speaker and contributed to sponsorship acquisition efforts