

Markus Heimerl

Embedded Systems Engineer

Contact

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in [markusheimerl](#)

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Technical Skills

Programming

C, Python, HDLs

Architectures

ARM, RISC-V

Signal Processing

SSM, FFT, Conv, Kalman

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