

# Markus Heimerl

Embedded Systems Engineer

## Contact

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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