

# 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 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