IVAN SPASIĆ

EMBEDDED SOFTWARE ENGINEER

ABOUT ME

Experienced, multi-disciplinary embedded software engineer focused on bridging electronics and software. Skilled in microcontrollers, circuit design and embedded Linux.

CONTACT DETAILS

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10040, Zagreb

WORK EXPERIENCE

>> Embedded software engineer

Byte Lab | 2017 to 2020

- Designed and developed embedded software for a wide range of consumer, luxury, and industrial products.
- Contributed to the development of multiple embedded Linux systems for connected and sensor-driven applications.
- Implemented and maintained device drivers and libraries for accelerometer, magnetometer, and gyroscope sensors, as well as GPS/GNSS modules.
- Participated in the design and firmware development of QUS and Crossbox wearable sports tracker projects.
- Developed and integrated LoRaWAN communication stacks for low-power wide-area networking.
- Experienced in the development of ESP32- and STM32-based embedded systems, from prototype to production-ready devices.

>> Embedded software engineer

Gideon Brothers | 2020 to 2024

- Designed and developed embedded Linux applications for **NXP i.MX8MM** based **Toradex** platforms, enabling robust real-time control and communication for autonomous mobile robots.
- Coordinated and led firmware development for the A-Unit Project, focusing on NXP architectures and safety-critical systems.
- Implemented and optimized software environments on **Toradex NXP i.MX8MM** modules, ensuring reliable integration with industrial hardware.
- Modified and created custom device trees to support new peripherals and hardware configurations.
- Developed and integrated a **Codesys PLC** environment into existing **Toradex NXP i.MX8MM** designs to support modular control logic.
- Created and managed Docker containers for application deployment and system isolation.
- Integrated production-ready embedded devices into Gideon's robotic infrastructure, ensuring compatibility with the company's software ecosystem.
- Bare-metal CANopen stack porting to Texas Instruments RM48 development and HET co-processor configuration for safety-critical tasks.

EDUCATION HISTORY

>> Faculty of Electrical Engineering and Computing, Zagreb

Master's degree, Electronic and Computer Engineering

- From 2015 to 2017.
- Master degree thesis on LoRaWAN implementation with STM32 microcontroller LoRaWAN demo application.
- Participated in Samsung MAD Challenge as a part of SAN team.

>> Faculty of Electrical Engineering and Computing, Zagreb

Bachelor's degree, Electrical, Electronics and Communications Engineering

- From 2012 to 2015.
- Bachelor degree thesis on using LCDs in embedded devices with demo application of STM32 ILI9341 LCD controler.

SKILLS

- C
- Python
- Bash
- Linux OS
- Embedded Linux
- git
- device tree
- Micropython
- KiCad
- STM32
- ESP32
- freeRTOS
- Zephyr
- Docker
- HomeAssistant
- gitlab CI/CD