András Gémes

Date of birth: 2 March 1993
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Work experience

Rust Embedded Software Engineer

HighTec EDV-Systeme GmbH
Feb 2023 – present, Budapest
Main tasks:

- implementing Rust HALs and BSPs
- implementing Rust benchmark framework

Software Development Engineer

Knorr-Bremse R&D Center
May 2018 – Jan 2023, Budapest
Main tasks:

- integrating ADAS SW on different ECUs
- configuring platform modules
- implementing platform supporting functions
- setting up the build environment
- performing static code analysis
- building and debugging the executables
- coordinating and supporting interns

Education

MSc in Mechatronics Engineering

Budapest University of Technology and Economics
Feb 2016 – June 2018, Budapest
Specialization: Intelligent embedded systems
Master's thesis: Design of a solar energy utilization system

BSc in Mechatronics Engineering

University of Pannonia
Sept 2012 – Jan 2016, Veszprém
Specialization: Process engineering
Thesis: Design and development of a multicopter-carried river sampling device

Technical skills

Working knowledge:

- embedded systems, microcontrollers (STM32, ESP32, AURIX) and peripherals/concepts (e.g. ADC/DAC, DMA, NVM, RTOS, stack, heap, interrupts, timers, bootloaders, energy modes)
- communication methods (Wi-Fi, BLE, MQTT + AWS IoT, CAN, J1939, UART, SPI, I2C)
- debug tools (ST-LINK/J-Link + GDB, UAD + UDE, PowerDebug + TRACE32, Wireshark, oscilloscope, logic analyzer)
- C, Rust, Python 3, Assembly (ARM)
- GCC, Clang, make, CMake, Meson, Cargo
- PC-Lint, Clang-Tidy, Valgrind
- Linux, Bash (Fedora, Debian, Ubuntu)
- Git (GitHub, GitLab, Bitbucket), Docker, Jenkins

Basic knowledge:

- electronic circuits and PCBs
- Zigbee, LoRaWAN
- IoT hacking (e.g. Wi-Fi, CAN)

Language skills

- English (working professional)
- Hungarian (native)

Hobbies – projects

- contributing to open-source projects (e.g. aircrack-ng and hcxdumptool)
- working on my STM32 and ESP32 projects (e.g. rustlink, esp32-phantom, esp32-mqtt, stm32-rf-scanner and stm32-dc-dc)
- studying for my CEH exam