Nando Marcel Galliard

FPGA/SoC Embedded Software Engineer

Zurich | Switzerland | Swiss citizen

+41 79 349 43 13

nando.galliard@hotmail.com

linkedin | github/nandogalliard

ngalliard.ch contains all project papers

Work

FPGA/SoC Embedded Software Engineer *01/2024 - present*

Enclustra Zurich

- Validion and bring-up of FPGA/SoC products, improving processes with automations.
- Implemented and maintained production tests to ensure reliable hardware performance.
- Organized workshops to enhance internal processes and boost team collaboration.
- Recognized for technical expertise, problem-solving, and proactive decision-making.

Junior FPGA/SoC Embedded Software Engineer *03/2023 - 12/2023*

Enclustra Zurich

- Spearheaded development of Zephyr RTOS based embedded controller for novel products.
- Validion and bring-up of FPGA/SoC products, improving processes with automations.
- Implemented and maintained production tests to ensure reliable hardware performance.

Corporal - Team Leader Telematics *09/2019 - present*

Civilprotection - Grisons FU GFS Cavalcade 3

- Organise and teach the repetition course for the function of state support.
- On deployment leader of eight soldiers which hold a command post.
- Recognized for team collaboration and risk assessment.

Education

Master of Science ETH Zürich *09/2020 - 03/2023*

Electrical Engineering & Information Technology

Major: Embedded systems design and very large systems integration

Minor: Communication networks and machine learning

Bachelor of Science ETH Zürich *09/2016 - 08/2020*

Electrical Engineering & Information Technology

Major: Communication networks and very large systems integration

Minor: Powerelectronics

Skills

Programming Languages	***Experienced:*** Python | C | Shell ***Familiar:*** C++ | C# | VHDL | Powershell | SQL | Matlab
Frameworks	Docker | GIT | CICD | CLI | Office | Backend Developer
Libraries	Jupyter | Matplotlib | Numpy | Pandas | Tensorflow (Keras)
Eingebettetes Design	Altium | Zephyr | Embedded Linux (Yocto/Petalinux) | FreeRTOS
General Keywords	Logical Approach | Data Analysis | Debug | Software Testing
Languages	***Native:*** German ***Fluent:*** English

Reference available upon request. | All project papers visible on website.

Projects

Design and Validation: Combined Power Tracer and Sensor Emulator *08/2022 - 02/2023*

Masters Thesis

The product is a FPGA based source measurement unit with 6 analog power channels, power delivery, logic ports and sensor emulation for device under test.

Tools & Technologies: C, C++, Python, VHDL, Altium, Git, Latex, FreeRTOS

Fusion of BLE direction finding and UWB ranging for indoor localization *03/2022 - 05/2022*

Semester Thesis #2

Designed and validated single anchor localization system by combining BLE angulation and UWB lateration with Zephyr real-time operating system based firmware.

Tools & Technologies: C, C++, Python, Zephyr, nRF Connect, Git, Bash, Latex

Battery-less always-on smart camera with Sigfox Networks *11/2021 - 02/2022*

Semester Thesis #1

Designed and validated a smart camera with on-site energy harvesting with solar panel, face recognition with Tensorflow C and data transmission with long range wireless access network.

Tools & Technologies: C, C++, Python, STM32 Cube IDE, Altium Nexus, Tensorflow C, Git, Latex

Satellite Land Use Mapping for Rapid Infrastructure Planning *09/2021 - 12/2021*

Department of Computer Science

Automatically mapped complex urban land use patterns from highres satellite images with. Employed CycleGAN related style-transfer approach to generate synthetic image-label pairs for an unlabeled target domain by leveraging data from a labeled source domain.

Tools & Technologies: Python, Tensorflow (Keras), Pandas, Git, Latex

Fictional business proposal on the creation of a big data based guide *02/2021 - 05/2021*

Department of Management, Technology, and Economics, ETH Zürich

In a case project assumed the role of a consultant to Migros and proposed an opportunity to use existing technology and resources to further digitalize the company and connect online platforms in order to create a user-friendly environment that could be used as a recommendation system.

Tools & Technologies: Office, Latex

Building a mini-Internet *02/2020 - 12/2021*

Enabled end-to-end connectivity across 80 Autonomous Systems

Assumed system admin role of single autonomous system composed of hundreds of network devices. Implemented classic routing negotiation protocols to outside AS, inside own AS implemented features including Link failure detection, load balancing and traffic control.

Tools & Technologies: Python, Bash, FRRouting, Git, Latex