



Nando Marcel Galliard

MSc ETH Electrical Engineer

Zurich | Switzerland | Swiss citizen

+41 79 349 43 13

nando.galliard@hotmail.com

linkedin | github/nandogalliard

galliard.ga contains all project papers

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

Matura

09/2008 - 07/2014

EMS Schiers, Grisons

Major: Mathematics and Physics

Minor: European History

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 actual deployment leader of group of up to eight people which hold a command post

Skills

PROGRAMMING LANGUAGES

Experienced: Python | C

FRAMEWORKS

Familiar: C++ | SystemVerilog | Bash | Powershell | SQL | Matlab

LIBRARIES

Docker | GIT | CLI | Office | Backend Developer

Jupyter | Matplotlib | Numpy | Pandas

Scikit-learn | Tensorflow (Keras)

EMBEDDED DESIGN

Altium NEXUS | Zephyr | nRF Connect | STM32 Cube IDE

LANGUAGES

Native: German **Fluent:** English

Extra

- Teaching assistant for professorship of high power electronics at ETH Zurich over FS 2021
- Salesman for MediaMarkt Chur from 2016 until 2020 as a sidejob
- Tutor for grammar school level math and physics at Fit4School

Projects

Master Thesis

08/2022 - 02/2023

Designed and validated a combined power tracer and sensor emulator for the evaluation of embedded hardware / software system designs

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, SystemVerilog, Altium Nexus, Git, Latex

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 lation 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

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