

## Some Projects in Software

- 2023      **Evolutionary optimization of small world neuromorphic systems for low-power on-edge computation**  
*Program:* ETH MSc in Mechanical Engineering  
*Course:* Semester project at INI-UZH with prof. Melika Payvand  
**Neuromorphic computing, Machine Learning, electronics, python and C++**
- 2022      **5 computer vision mini-projects**  
*Program:* ETH MSc in Mechanical Engineering  
*Course:* Image Analysis and Computer Vision  
**Image analysis and computer vision**

## Some Projects in Embedded Systems Automation/Robotics

- 2022      **FPGA: implementation of a camera and LCD display**  
**MSP432: joystick control of a servo-motor**  
*Program:* EPFL MSc in Micro-Engineering  
*Course:* Embedded Systems  
**C, VHDL, Quartus, low level software architecture**
- 2021      **Design, prototyping and testing of a automatic vibration measurement system using linear stages and a laser doppler vibrometer**  
*Program:* EPFL MSc in Micro-Engineering  
*Course:* Semester project at MOBOTS  
**Automation, RPi micro-python**
- 2021      **Programming of a mobile robot (e-puck) in C for an odometry, camera and ToF based “go-fetch” game**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Robotics and Embedded systems  
**Parallel processing of sensor data, version control (GIT)**
- 2020      **AVR microcontroller: control of a computer fan based on temperature measurements from an SHT11 Sensirion sensor**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Microcontrollers  
**Assembly, C**

**Eric Carl Richter**

**20/08/1998**

BSc Micro- Engineering EPFL  
MSc Mechanical Engineering ETH

## Some Projects in Product design, CAD & Simulation

- 2022      **COMSOL simulation of waveguide coupled superconducting EM resonators**  
*Program:* EPFL MSc in Micro-Engineering  
*Course:* Semester Project at LMIS1 with prof. Jurgen Brugger  
**Simulation**
- 2021      **Design, CATIA V5 modelling, 3D printing and testing of a temperature and humidity sensor casing at EPFL Bachelor**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Manufacturing Technologies DLL  
**CAD, Additive Manufacturing, Packaging**
- 2020      **Design and prototyping of a flexure mechanism for a high precision kibble balance**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Mechanism Conception II  
**CAD, Precision instruments, Flexure mechanisms**
- 2019      **Design, CATIA V5 CAD modelling technical drawings of a manual mechanical paper-folding machine**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Mechanical Construction II  
**CAD, technical drawing**

## Some Projects in Manufacturing, Management, and Sustainability

- 2022      **Corporate sustainability project proposal for COOP (reducing food waste through dynamic pricing)**  
*Program:* ETH MSc in Mechanical Engineering  
*Course:* Corporate Sustainability  
**Corporate Sustainability, Green Finance**
- 2022      **HILTI factory and warehouse mock yearly performance assessment**  
*Program:* ETH MSc in Mechanical Engineering  
*Course:* Production and Operations Management (POM)  
**POM, Lean, warehousing, production planning etc...**
- 2022      **Debt for Nature Swap and Green Bonds: where can they be used**  
*Program:* EPFL MSc in Micro-Engineering  
*Course:* Economic Growth and Sustainability  
**Green Finance**
- 2021      **Multi-machine manufacturing system: modelling and simulation**  
*Program:* EPFL MSc in Micro-Engineering  
*Course:* Manufacturing and Supply Chain Dynamics  
**SCM, Anylogic**
- 2021      **Reverse Engineering of a Bialetti Moka Express and manufacturing process analysis**  
*Program:* EPFL BSc in Micro-Engineering  
*Course:* Manufacturing technologies  
**Manufacturing Technologies, Reverse Engineering methodology**

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BSc Micro- Engineering EPFL  
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## **Some Projects in Consulting**

- 2022      **Market entry strategy for UniDress (second hand clothing platform)**  
*Program: ShARE's Leadership Programme of Excellence*  
**Consulting, Second hand clothing industry**
- 2021      **Market entry strategy for Time Designers (watch making)**  
*Program: ShARE's Leadership Programme of Excellence*  
**Consulting, Watch-Making industry**
- 2020      **Business plan draft for Pneumoscope (AI stethoscope)**  
*Program: ShARE's Leadership Programme of Excellence*  
**Consulting, Medical Devices Industry**
- 2019      **Consulting presentation about renewables in Lebanon**  
*Program: ShARE's Leadership Programme of Excellence*  
**Presentation Skills**