Eric Carl Richter
20/08/1998

BSc Micro- Engineering EPFL
MSc Mechanical Engineering ETH

Contact
Mobile: *+41 78 686 55 30*
Email: *errichter@ethz.ch*
Linkedin: *eric-richter-704567184*

Roots
Switzerland: *Citizen*
Sweden (Father): *Citizen*
Lebanon (Mother)

Languages
English: *Native*
French: *Native*
German: *Fluent*
Swedish: Conversational

Programming Experience
Python
C++
C
Matlab
VHDL
Assembly
SQL

Modelling and Simulation
Fusion 360
Catia V5
COMSOL

Education

2024 2022	ETHZ Zürich	**MSc in Mechanical Engineering** GPA: **5.41** *(1-6, pass at 4)* ***Fields of study:*** *Robotics and Control, Machine Learning, POM and Sustainability, Micro- Nano- Systems*
2022 2020	ShARE (EPFL Chapter)	**ShARE's Leadership Programme of Excellence** ***Fields of study:*** *Consulting, Management, the Do Well Do Good mindset*
2022 2021	EPFL Lausanne	**MSc in Micro-Engineering** GPA: **5.30** *(1-6, pass at 4)* ***Fields of study:*** *Embedded Electronics, Semi-Conductors, Micro- Nano Systems, Supply Chain Dynamics, Robotics, Photovoltaics*
2021 2018	EPFL Lausanne	**BSc in Micro-Engineering at EPFL** GPA: **5.23** *(1-6, pass at 4)* ***Fields of study:*** *Mechanical Engineering, Electrical Engineering, Material Science, Computer science, Manufacturing, Optics, Micro-fabrication, Sensors, Micro-Controllers, FPGA, Mobile Robots*
2017	USJ (Beirut)	**Off-Program Studies at USJ Beirut** ***Fields of study:*** *International Relations, Geopolitics, History, Philosophy*

Experience

2023	Chiral Nano	**Research Assistant** ***Practical Skills:*** *Clean Room*
2021	EPFL Lausanne	**Teaching Assistant in Mathematical Analysis ("Analyse II")**
2018	Swiss Army	**Intelligence Soldier in the Air Force**

Student Associations/ Competitions

2021	iGEM Lausanne	**Award Winning Team at IGEM: International Genetically Engineered Machine** ***Main Positions:*** *Head Engineer, Chemistry laboratory operator* ***Awards:*** *Gold Medal, Best wiki award, best environmental project nomination*
2022 2020	ShARE Lausanne	**EPFL ShARE Chapter** ***Main Positions:*** *Vice-President (2022), Team Manager, Consultant*

Eric Carl Richter
20/08/1998
BSc Micro- Engineering EPFL
MSc Mechanical Engineering ETH

Contact
Mobile: *+41 78 686 55 30*
Email: *errichter@ethz.ch*
Linkedin: *eric-richter-704567184*

Roots
Switzerland: *Citizen*
Sweden (Father): *Citizen*
Lebanon (Mother)

Languages
English: *Native*
French: *Native*
German: *Fluent*
Swedish: Conversational

Programming Experience
Python
C++
C
Matlab
VHDL
Assembly
SQL

Modelling and Simulation
Fusion 360
Catia V5
COMSOL

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

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)

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

Contact
Mobile: *+41 78 686 55 30*
Email: *errichter@ethz.ch*
Linkedin: *eric-richter-704567184*

Roots
Switzerland: *Citizen*
Sweden (Father): *Citizen*
Lebanon (Mother)

Languages
English: *Native*
French: *Native*
German: *Fluent*
Swedish: Conversational

Programming Experience
Python
C++
C
Matlab
VHDL
Assembly
SQL

Modelling and Simulation
Fusion 360
Catia V5
COMSOL

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 **Manufacturing Systems and Supply chain Management aggregation, queuing, and AnyLogic mini-project.**
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

Eric Carl Richter
20/08/1998
BSc Micro- Engineering EPFL
MSc Mechanical Engineering ETH

Contact
Mobile: *+41 78 686 55 30*
Email: *errichter@ethz.ch*
Linkedin: *eric-richter-704567184*

Roots
Switzerland: *Citizen*
Sweden (Father): *Citizen*
Lebanon (Mother)

Languages
English: *Native*
French: *Native*
German: *Fluent*
Swedish: Conversational

Programming Experience
Python
C++
C
Matlab
VHDL
Assembly
SQL

Modelling and Simulation
Fusion 360
Catia V5
COMSOL

Some Projects in Consulting

2022   **Market entry etrategy 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 sthethoscope)**
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