Eric Richter

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Education

ETH | Zürich, Switzerland
Master of Science in Mechanical Engineering (GDP 5.49/6) March 2025
- Majored in micro- nanosystems and robotics

EPFL | Lausanne, Switzerland
Master of Science in Microengineering (Discontinued after 61ECTS, GDP of 5.3/6) July 2022
Bachelor of Science in Microengineering (GDP of 5.23/6) July 2021
- Majored in MEMS related electrical, mechanical, and materials engineering

USJ | Beirut, Lebanon
Off-Curriculum International Relations Studies December 2017

Relevant Experience

Boston University | Boston, MA USA
Research Fellow September 2024 - June 2025
- Implemented a set of explicit python models for numerical simulation of advection, diffusion, adsorption, heat transfer.
- Designed the stencil used for making the 1st functional thermal wave sensor on multi-layered batteries.
- Challenged the design of an adsorption test chamber with COMSOL simulations, redesigned and built the improved version, which runs 6x faster with completely validated physics.

Sensirion AG | Stäfa, Switzerland
Engineering Intern September 2023 - February 2024
- Achieved 0.01°C state-of-the-art accuracy with a self-made humidity sensor costing 1% of the alternatives.
- Iterated through 3 rapid hardware prototyping cycles.
- Ensured high stability using non-linear PID control.

EPFL | Lausanne, Switzerland
Research Assistant at LMIS1 February - June 2022
- Generated insights for the design of a thermally sensitive electro-magnetically coupled superconducting resonator.

Research Assistant at MOBOTS September 2021 - January 2022
- Designed, constructed and automated a Doppler Laser Vibrometer mechanical plane surface measurement system using Raspberry Pi and linear stages for bee comb characterization.

ShARE EPFL | Lausanne, Switzerland
Vice President, Mentor, Consultant September 2020 - November 2022
- Led and mentored 25+ members on their respective cases.
- Collaborated with EPFL's startup accelerator by completing the product-market fit analysis for 3 startups.

Relevant Achievements

Panel Discussion | Zürich, Switzerland
Host, Event Organizer January - May 2024
- Moderated a debate between lobbyists and academics around carbon pricing and its alternatives in front of a 200+ person audience.

iGEM Competition | Cambridge, MA (USA)
Head Engineer, Gold Medal, Best Website, Best Environmental Project Nomination February - November 2021
- Iterated through the design of a bioreactor for bioremediation of heavy metals from the environment.
- Managed stakeholders, outreach, and communication around the issues studied during the 9 month project.

Certifications

SHARE's Leadership Programme of Excellence | International June 2022
Arabic Elementary Level | Saifi Institute for Levantine Arabic of Beirut December 2017
Swedish Conversational Level | Folkuniversitetet in Stockholm July 2015
Conservatory Certificate For End Of Piano Studies | COV, Nyon July 2017

Additional Skills

Languages: English(Native); French(Native); German(Proficient); Swedish(Conversational)
Programming proficiency: Python, C++, C, VHDL
Engineering Software: Multiphysics simulation (COMSOL), CAD (Catia V5, Fusion 360), Electrical simulation (LtSpice), Hardware programming (Vivado Suite, Quartus)
Clean room Processes: Photolithography, Sputtering, Bosch process, HF etching, ALD, Wire bonding, SEM
Personal: Multidisciplinary; Multicultural; Positive; Self and objective driven