

EDUCATION

ETH Zürich

BSc Mechanical Engineering
2025 – present

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BSc Physics (Basisjahr) — Ø 5.2/6.0
2024 – 2025
Transferred to MechEng for an applied focus

Atert-Lycée Redange (LU)

Mathematics & Computer Science
2021 – 2024

AWARDS & PROGRAMS

- Bainhorizon STEM Mentoring, Bain & Company – Selected Mentee, 2026–27
- Jonk Fuerscher Science Contest – Winner, 2026
- European Physics Olympiad – Luxembourg representative, 2024
- Physics Olympiad LU – 5th nationally, 2024
- Astronaut for a Day – Space Ambassador, 2023
- Honor Student – Atert-Lycée, 2017–2022

TECHNICAL SKILLS

Programming

Python · Rust · C++

Embedded

STM32 · Teensy · Arduino · Real-time firmware

Hardware

Multi-layer PCB · KiCad · EAGLE · Fusion 360

Control & Simulation

MATLAB/Simulink · LQR · Sensor fusion · 6-DOF

Software & AI

Next.js · Supabase · MCP · Git

LANGUAGES

Luxembourgish	Native
German	Fluent
French	Fluent
English	Fluent

PROJECTS & ENGINEERING

LazyCart – Co-Founder

2026 – present

AI grocery shopping agent · EWOR & Databricks · 4-person ETH founding team

- Selected for Hack-Nation Venture Lab Cohort 2 — 30 of 5,500+ applicants
- Own the agent, frontend and app UX: maps free-text intent ("4 dinners under CHF 55") to a validated basket of real products
- Built on Next.js and Supabase with an MCP layer over the product database
- Designed the delivery model around route density and unit economics; pilot scoped for 100–300 users at ETH Student Village

ARIS – Akademische Raumfahrt Initiative Schweiz

2025 – present

Avionics · Asteria liquid-propellant rocket · 50+ members

- Designed the Propellant Control Board: a 4-layer STM32G4 PCB used in three positions (engine, LOX and fuel run tanks)
- Integrated isolated CAN, RS485/analog pressure sensing, thermocouple readout and four solenoid channels with current sensing and 24 V arming
- Wrote Rust firmware for sensor acquisition, actuation and fault-state management; bench-validated solenoid switching and current sensing

Hack-Nation Global AI Hackathon – 6th of 1,000+ teams

2026

MIT-backed · 60+ countries · 24h sprint

- Built HumanAPI Lightning in 24h: a marketplace where AI agents hire humans and settle payment over the Bitcoin Lightning Network

Thrust Vector Control Rocket – Jonk Fuerscher Winner

2024 – 2026

2-person team · Active stabilization · IFEST International Science Fair

- Built the full TVC stack on a custom Teensy 4.1 board: two-axis gimbal, Madgwick attitude filter and an LQR attitude controller at 100 Hz
- Wrote the flight software as a four-state machine with 25 Hz health logging, buffering to flash in ascent to avoid SD write latency
- Tuned gains against a nonlinear Simulink model with actuator limits, sensor noise and gust disturbances; validated on ground tests

EXPERIENCE

K.S.L. Automation – Engineering Intern

Jul 2023

Arduino · Linear actuator control · PVD machine

- Programmed a linear actuator controller with operator interface for a PVD machine

Ameco Pauly – Mechanical Intern

Feb 2023

CNC programming · Production assembly

- Programmed CNC machines and assisted in production assembly

ArcelorMittal – IT Intern

Jul 2022

Internal IT · Legacy inventory system

SES S.A. – Engineering Trainee

Nov 2021

Satellite operator · Luxembourg