

Education

- 2026 - Present | **Master of Science in Mathematics** | ETH Zürich
- 2022 - 2026 | **Bachelor of Science in Mathematics — 5.9/6.0** | ETH Zürich
- Jan - Jun 2025 | **Exchange Semester — 6.0/6.0** | The Chinese University of Hong Kong

Experience

- Apr - Jul 2026 | **Software & Robotics Assistant** | Robotic Systems Lab (RSL), ETH Zürich
- Extended kleinkram, the lab's robot-data management platform, focusing on the Python CLI and SDK; designed and built a hardware/software measurement system for end-to-end latency of the Qualisys motion-capture system.
 - Supported outdoor field tests and deployments of robotic systems and day-to-day lab operations during this 15-week Swiss civil service placement.
- 2023 - 2025 | **Teaching Assistant** | ETH Zürich
- Algebra I* — prepared and led weekly exercise classes with notes, exercises, and supporting material; received the 2024 VMP Best Teaching Assistant Award.
 - Computer Science (C++)* — led weekly exercise classes; *Mathematical Writing* (two semesters) — advised students weekly and graded papers with detailed feedback on correctness, structure, and exposition.
- Nov 2021 - Aug 2022 | **Software Development Intern and Full-Time Developer** | c-alm AG — pension-fund consulting
- Contributed to internal MATLAB software for asset-liability-management analyses and pension-fund projections, implementing features across the application and its computational components.
 - Rebuilt an Excel workflow from scratch, automating manual processes with extensive VBA and integrations to external databases.

Projects & Writing

- 2026 | **Bachelor thesis — An Introduction to the Dynamics of Compact Group Automorphisms after Klaus Schmidt** | ETH Zürich
- Studied dynamical systems of group actions on compact metrizable groups — ergodicity, mixing, expansiveness — and their algebraic characterization via Pontryagin duality and module methods.
- 2023 - Present | **Mathematical Writing** | Independent expository mathematics and teaching material
- Expository papers on cyclotomic-polynomial irreducibility and modules over principal ideal domains, plus teaching material for *Algebra I* and *Computer Science* at ETH Zürich.
- 2021 - Present | **Self-Hosted Home Server** | Personal project
- Design, build, and operate a home server on TrueNAS SCALE running 15+ self-hosted Docker services: a git forge with CI/CD, an LLM gateway, VPN, and media — all managed as declarative compose stacks.
- 2020 | **Reinforcement Learning — Matura Thesis**
- Self-directed deep dive into reinforcement learning: solved Cartpole with tabular Q-learning and trained deep Q-network agents for Snake, outperforming a 15-person human test group.

Technical Skills

- TECHNICAL | Python; C++; MATLAB; VBA · Linux; Git; Docker; TrueNAS SCALE; self-hosting
- LANGUAGES | German - native; English - fluent (C2 certified); French / Italian - functional; Mandarin - elementary

Recognition

- 2024 | **VMP Best Teaching Assistant Award, Algebra I**
- 2023 | **National Finalist, Swiss Youth in Science — for the Matura thesis on reinforcement learning**
- 2021 | **Rotary Award, Best Matura Paper**