

EDUCATION

University of Konstanz

Bachelor of Science in Computer Science

Konstanz, Germany

September 2023 – April 2028

- Relevant Coursework: Algorithms & Data Structures, Software Engineering, Linear Algebra, Operating Systems
- Academic Focus: Specializing in data science, low-level programming, and computational musicology

Lucerne University of Applied Sciences and Arts

Bachelor of Arts in Music; Instrumental classical music performance

Lucerne, Switzerland

September 2024 – July 2027

- Relevant Coursework: Music history, Music theory with a focus on Baroque and Classical era composition
- Experience in chamber music, orchestral playing and soloist performance, including stage training

Heinrich-Suso-Gymnasium

Abitur (University entrance qualification)

Konstanz, Germany

September 2015 – July 2023

- Final Grade: 1.0 (maximum possible grade, highest distinction)
- Early Enrollment: University courses in politics, economics, and computer science parallel to high school
- School awards for excellence in Mathematics, German and English upon graduation

WORK EXPERIENCE

École Polytechnique Fédérale de Lausanne

Software Engineering Research Intern; Digital and Cognitive Musicology Lab

Lausanne, Switzerland

July 2026 – August 2026

- Real-Time Pipeline: Contributed to a low-latency C++/Python (nanobind) software for live piano improvisation
- Optimization: Implemented SIMD-accelerated memory queries (AVX, SSE3, NEON), keeping the audio thread lock-free and verifying performance through automated benchmarks.
- Concurrency: Designed thread-safe memory utilities using custom guards, RCU patterns and sync. primitives.
- Serialization: Developed a custom binary file format and Python CLI parsing raw MIDI into database files.
- Domain Tooling: Built style-aware audio plugins and a type-safe Python parser for a custom pattern language.

Kieweg und Freiermuth Werbeagentur

Working Student; Corporate Web Design and Marketing

Konstanz, Germany

October 2023 – January 2024

- Built full stack corporate B2B websites utilizing custom Contao CMS extensions
- Mentored trainees via hands-on instruction in web development best practices and approaches.

ZHAW School of Management and Law

Working Student; Public Governance & Data Science

Winterthur, Switzerland

September 2023 – November 2023

- Developed a Python web crawler for extraction, cross-referencing, and validation of municipal contact data.
- Conducted quantitative and qualitative usability data analysis and surveys for a municipal energy portal.

LEADERSHIP & EXTRACURRICULARS

Heinrich-Suso-Gymnasium Konstanz

Student Teaching Assistant

Konstanz, Germany

September 2023 – July 2024

- Directed the school's web design club, mentoring students in technical problem-solving and guiding them from initial concepts to fully deployed websites.

ADDITIONAL INFORMATION

Languages: Fluent in English and German, Basic Skills in French

Awards: Laureate of the 2025 AIxChange Prompt Injection Challenge; 1st Prize (25/25 pts) at Bundeswettbewerb Jugend Musiziert (2023)

Skills C++, Python (nanobind, PyTorch, Scikit-learn), Git/GitLab CI/CD, Web development (Svelte, React, Contao CMS)