Hermes Reisner

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EDUCATION

since 2025	**BSc Computer Science, expected graduation 2028**	University of Basel, Basel
2024 – 2025	**BSc Mechanical Engineering, first year**	ETH Zurich, Zurich
2019 – 2023	**Matura (university entrance diploma), major in Applied Mathematics**	Gymnasium Muttenz
2024 – 2026	**Harvard CS50 series: CS50P, CS50x, CS50 AI, CS50 SQL**	Online self-study

EXPERIENCE

2026 — **Section Leader** — Stanford Code in Place, online

Volunteer teacher of a weekly online section in Stanford's introductory Python course.

2024 – 2025 — **Bookkeeping and Administration** — Öko-Job, Liestal

IT-based bookkeeping, data maintenance and administrative processes.

2023 – 2024 — **Civilian Service** — University Hospital Basel, Intensive Care Unit

Worked on the intensive care unit with growing responsibility, including administrative tasks.

PROJECTS

since 2026 — **LocalSR – desktop app for local image and video restoration** — HerRei/local-upscale

- Main developer and maintainer of the open-source app (MIT): Svelte UI, Rust/Tauri host and isolated Python/PyTorch worker; public macOS beta since September 2026.
- Release engineering: CI on self-hosted GitHub runners, signed and notarised macOS builds, signed in-app updates, Homebrew tap; pytest, Vitest.

2026 — **PianoGPT – transformer for piano music** — HerRei/gpt2-piano-mps-12k

- GPT-2 language model trained from scratch on about 12,000 MIDI files; training on Apple Silicon, checkpoint comparison, ONNX export (CS50 AI final project).

2024 – 2026 — **ESP32 SBB Tracker – public transport departure board** — HerRei/Sbb_Tracker_Sissach

- ESP32 with ST7789 TFT in C++/Arduino: live data from the transport.opendata.ch API over HTTPS, JSON filtering, delay display, hardware watchdog (CS50x final project).

2026 — **PhantomHunt – multiplayer game, CS108 University of Basel** — HerRei/PhantomHunt

- 3-vs-1 game in Java/JavaFX built in a team of five; my part: client-server networking (TCP), lobby and game-state management, round flow, scoring; JUnit 5, Mockito, CI.

2026 — **Further projects**

HAT fine-tuning for face super-resolution (PyTorch/ROCm, own benchmark, weight interpolation) · **train-tui**, terminal dashboard for ML training in pure C · **Nature Inventory Delta**, FastAPI/Streamlit tool with an LLM SQL planner · **own CI server** (Ubuntu, Ansible, Docker/KVM, GitHub runners)

SKILLS

Programming languages	Python, Java, Rust, C/C++, TypeScript, Swift, MATLAB, SQL
Machine learning	PyTorch (MPS, ROCm, CUDA), Hugging Face Transformers, BasicSR/Spandrel, Qiskit
Tools and practice	Tauri, Svelte, JavaFX, FastAPI, Git, GitHub Actions (self-hosted runners), Docker, Ansible, Linux, macOS code signing and notarisation, pytest, JUnit 5, Vitest, ESP32/Arduino

LANGUAGES

German	native
English	C2, fluent
French	B2, good working knowledge

INTERESTS

Chess	tournament player, about 1800 (Chess.com)
Sports	fitness and swimming