

Thomas Rolf Mannhart

Professional AI Engineer

📍 Zürich, Switzerland ✉️ thomas@mannhart.ai

🌐 github.com/thommann 🌐 t.mannhart.ai

PROFILE

In Zürich, my team and I are designing and building the Swiss AI Hub, an AI platform for organizations of every size. For our customers, I design custom AI solutions to solve their most pressing problems that were previously impossible or extremely difficult to solve without AI. I'm passionate about sharing my experience in building and implementing an AI-augmented development process.

EXPERIENCE

2025–now

Professional AI Engineer

bbv Software Services AG, Zürich

- Development of a comprehensive AI platform.
- Architecture design of the AI platform in collaboration with the software architect.
- Architecture and implementation of customized AI solutions, in particular Retrieval-Augmented Generation (RAG) systems, for customer projects.
- Technical leadership (Dev Lead) of customer projects in Artificial Intelligence in the industrial sector and market research.
- Operation and maintenance of the AI platform on-site including customer-specific AI solutions.
- Delivering technical talks and webinars on AI-augmented software development.

2023–2024

Professional Software Engineer

Ergon Informatik AG, Zürich

📄 [Reference letter](#)

- Analysis, design, and implementation of software components.
- Requirements engineering and creation of requirement criteria and specifications.
- Mentoring of new team members.
- Contribution to project proposals.
- Second- and third-level support for customer projects.
- Conception and implementation of prototypes.
- Creation of automated test cases (E2E tests).
- Code reviews and implementation of review feedback.
- Youth outreach: organized and conducted IT workshops for students.

2020–2023

Senior Full Stack Developer

PolygonSoftware, Opfikon

📄 [Reference letter](#)

- Full stack development of web applications, as well as computer vision and machine learning projects.
- Design and creation of software architecture.
- Supervision of software development teams.
- Coordination with product owners and clients on application requirements.
- Elicitation of software requirements.

2019–2020

Junior Software Engineer

swissbiomechanics ag, Zürich

📄 [Reference letter](#)

- Management of an independent software project.
- Conducting and leading stakeholder meetings.
- Stakeholder needs analysis and creative problem solving.
- Independent software development.
- Coordination with other developers and projects.

EDUCATION

- 2020–2023 **MSc in Informatics (Artificial Intelligence)**
University of Zürich
Thesis: KroneDB — Compressing and Querying Time Series Data using the Kronecker Decomposition. Supervised by Johannes Marti and Dan Olteanu.
Project: Airspace Auction Simulator — with Johann Schwabe and Joel Barmettler.
Other: Exchange semester at the National Taiwan University (NTU), Taipei.
- 2017–2020 **BSc in Informatics (Software Systems)**
University of Zürich
Thesis: A General-purpose Range Join Algorithm for PostgreSQL. Written at the Free University of Bozen-Bolzano, supervised by Anton Dignös.
Other: Semesterpreis HS20 — awarded for outstanding bachelor's thesis by the Faculty of Business, Economics and Informatics.
🏆 Semesterpreis HS20

SKILLS

- Programming:** Python, TypeScript, Java, Kotlin, C++, SQL
- AI Platform:** RAG, Agent Orchestration, MCP, LiteLLM, vLLM, Milvus, Dagster, MinerU, Docling, Presidio
- Web Frameworks:** FastAPI, Angular, Vue, Eleventy
- Cloud & Infrastructure:** AWS, Azure, OpenStack, Docker, Keycloak, Traefik, Caddy, Nginx
- Data & Messaging:** PostgreSQL, Redis, MongoDB, NATS / JetStream
- Observability:** Langfuse, OpenTelemetry, SigNoz
- Tools:** Claude Code, Git, GitHub
- Competencies:** Team Leadership, Customer Communication, Stakeholder Management, Mentoring, Youth Outreach, Public Speaking, AI-Augmented Software Engineering
- Languages:** German (native), English (fluent), French (basic), Mandarin (beginner)

PROJECTS

- KI als Entwicklungspartner** bbv webinar on practical methods, tools, and proven strategies for integrating AI into the software development lifecycle — from requirements analysis through code development to testing.
- AI-Augmented Software Engineering** Talk at the FHNW Data Science & Data Engineering Alumni Event on integrating AI into the software development lifecycle — from enterprise AI strategy and the Swiss AI Hub, to working with coding agents and the "Development Funnel" for context-driven AI workflows.
- About the Swiss AI Hub** Swiss-made, model-agnostic enterprise AI platform. Listed on Siemens Xcelerator, certified Swiss Made Software. 🌐 [Documentation](#)
- t.mannhart.ai** My website — a bilingual portfolio with an integrated AI chatbot, built with Eleventy and vanilla JS. 🌐 [t.mannhart.ai](#)
- Airspace Auction Simulator** A simulation framework for auctioning airspace to autonomous drones. Master's team project at UZH with Johann Schwabe and Joel Barmettler. 🐙 [GitHub](#)