Thomas Walter

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Education

Yale University Aug. 2021 – Dec. 2025
Bachelor of Science in Computer Science *New Haven, CT*
Relevant Courses: Systems Programming, Big Data Systems (Graduate Level Course), Database Systems, Software Engineering, Quantum Computing, Algorithms, Computer Intelligence for Games, Full-Stack Web Development, Data Structures, Real Analysis, Linear Algebra

Experience

Software Engineer Intern Jun. – Aug. 2025
OnePointFive *New York, NY*
- Designed and implemented a full-stack RFP analysis and proposal-generation platform (Flask, Node.js, Python, PostgreSQL) that cut turnaround by 4+ hours per proposal; built scalable vector-embedding search pipeline (ChromaDB, PGVector) supporting low-latency similarity queries across thousands of documents
- Developed and integrated 5+ MCP servers with defined APIs to automate interactions with internal tools via Claude Desktop — used daily and saving 60+ workdays annually
- Built robust, API-driven data pipelines syncing company tools (Zoom, Airtable, Notion, Slack, Google Drive), reducing manual data transfer time and eliminating copy errors

Software Engineer Jan. – May 2025
Blenman Innovation Group (Yale School of Medicine) *New Haven, CT*
- Refactored visAPPprot API into modular components using Flask blueprints, improving maintainability and extensibility; configured build pipeline with 'renv' package manager, ensuring predictable cross-OS builds
- Optimized data pipeline performance by eliminating duplicated computation in R over multi-million-entry datasets, improving CPU efficiency and reducing runtime by over 20%
- Co-authored a EuroVis 2025 peer-reviewed paper analyzing maintainability and distribution challenges in biomedical software engineering

Firmware Engineer Intern May – Aug. 2024
Schneider Electric — Servo-Drive Network Communications *Marktheidenfeld, Germany*
- Engineered real-time industrial messaging pipelines (OPC UA, MQTT, TCP/UDP) to improve servo-drive communication throughput and decrease control-loop latency
- Integrated OPC UA node structures with Schneider's EcoStruxure Machine Expert ecosystem, enabling seamless interoperability between the servo-drive and Schneider software
- Automated OPC UA Compliance Test Tool workflows via Python/Bash scripting, accelerating validation by 40%
- Built log-parsing pipelines for CTT output, cutting test review time by approx. 30 mins per test run

Projects

PracticeRoom | *Swift, SwiftUI, Supabase, FastAPI*
- iOS social video app for classical musicians, using Supabase for backend and a separate Render-hosted FastAPI server for asynchronous audio analysis; enables seamless UX via efficient pagination and caching of video data

Kanji Kana Hard | *Python, Flask, React, SQL, TensorFlow*
- Full-stack app for Japanese Kanji learning featuring a drawing canvas and ML handwriting recognition model; designed backend APIs to ingest user input, persist results, serve predictions to client

Jukebox | *Python, Django, React, Redis, PostgreSQL, Docker*
- Social platform for music reviews and discovery; built authentication flows (OAuth), real-time messaging (Django ASGI, Redis), testing suites (vitest, pytest, playwright), CI/CD pipelines (GitHub Actions, Render)

Skills

Technical Skills: Python, C/C++, JavaScript/TypeScript, Rust, Java, React, Swift, Node.js, Flask, Django, PostgreSQL, Docker, Kubernetes, Git, REST APIs, CI/CD, Linux, R, Redis, Networking, Distributed Systems

Language Skills: English (fluent), German (fluent), Swiss-German (intermediate), Spanish (beginner)

Cello Performance: Yale Symphony Orchestra (principal cellist); German National Youth Orchestra (cellist); 1st Prize German Youth Music Competition (Regional, State & International); Music Academy Liechtenstein (scholar); Juilliard and New England Conservatory bachelor's program acceptances