

THOMAS WALTER

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EDUCATION

Yale University, New Haven, CT — *B.S. in Computer Science, GPA: 3.71*

Dec. 2025

Relevant Coursework: Big Data Systems, Software Engineering, Systems Programming, Database Systems, Full-Stack Web Development, Algorithms, Quantum Computing, Data Structures, Linear Algebra, Real Analysis

TECHNICAL SKILLS

Proficient: Python, JavaScript/TypeScript, React, Next.js, C/C++, Swift, SwiftUI, Java, Rust, Node.js, Flask, Django, PostgreSQL, Supabase, REST API's, Docker, Git, GitHub Actions, Agile Development, AI Prompt Engineering

Familiar: AWS (S3, Amplify), TensorFlow, R, Distributed System Design, Networking Protocols, Google Cloud Platform

EXPERIENCE

OnePointFive, New York, NY

Jun. – Aug. 2025

Software Engineer

- Developed a full-stack application (Python, React, Flask, PostgreSQL, Railway) using vector embeddings (Chroma) and OpenAI API to analyze RFPs and auto-generate proposals, **cutting turnaround by 4+ hours per request**
- Designed and deployed AI-driven automations (Zapier, Python, REST APIs) integrating 5+ custom MCP servers into daily workflows, **saving 60+ workdays annually**
- Built API pipelines synchronizing Zoom, Airtable, Notion, Slack, and Google Drive, **reducing manual data errors by 80%**
- Authored internal AI governance and prompt engineering standards to improve quality of automated outputs

Blenman Innovation Group (Yale School of Medicine), New Haven, CT

Jan. – May 2025

Software Engineer

- Refactored *visAPPprot*, a clinical omics visualization tool, improving modularity and maintainability
- **Optimized data-load performance by ~20%** and ensured cross-OS reproducibility via ‘renv’ environment standardization
- Co-authored *EuroVis 2025* peer-reviewed paper on maintainability challenges in biomedical software engineering

Schneider Electric, Germany

May – Aug. 2024

Firmware Engineer Intern

- Engineered real-time servo drive communication pipelines (OPC UA, MQTT, TCP/UDP), reducing latency and boosting throughput in industrial automation systems
- Integrated OPC UA nodes with *EcoStruxure Machine Expert*, ensuring seamless interoperability in Schneider’s ecosystem
- 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 ~30 minutes** per run

PROJECTS, PUBLICATIONS & EXTRACURRICULARS

Scaling TRINITY: A Multi-attribute Data Store (*C++, multithreaded programming, distributed systems*)

- Senior thesis extending *Trinity*, a distributed self-indexing data store, to support 1000+-dimensional vector range queries for LLM embedding workloads

Challenges in Development, Distribution, and Maintenance of Software Visualization Tools in Biology and Medicine

- Peer-reviewed *EuroVis 2025* publication analyzing engineering and maintainability trade-offs in clinical research software

Kanji Kana Hard (*Python, Flask, React, SQL, TensorFlow*)

- Full-stack app for Japanese Kanji learning featuring a drawing canvas and ML handwriting recognition model

Jukebox (*React, Django, PostgreSQL*)

- “Goodreads for Music” — a social platform for music reviews and discovery, developed with a team of 6 engineers

PracticeRoom (*Swift, SwiftUI, Supabase, Supabase Storage*)

- iOS social app for classical musicians to upload practice clips, exchange feedback, and receive AI-driven performance analysis

Cello Performance

- Principal cellist, *Yale Symphony Orchestra*; cellist, *National Youth Orchestra of Germany*
- Winner, *German Youth Music Competition* (Regional, State, National); Finalist, *William Waite Concerto Competition*
- Scholar, *Music Academy Liechtenstein*; Scholarship Winner (\$3,000 prize), *Neumann Foundation Music Competition*
- *Juilliard* and *New England Conservatory* acceptances for bachelor’s program