

TIMOTHY OTHOLT

Software Engineer · Agentic AI Engineering · Embedded C & Assembly · A.A.S. AI Software Engineering (4.0)

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SUMMARY

Returning embedded engineer, now a student (A.A.S. in AI Software Engineering, 4.0 GPA, December 2027; coursework in Python, data structures and algorithms, and object-oriented programming), writing TypeScript and Python. I wrote BIOS firmware in C and x86 assembly that shipped in millions of PCs, plus drivers and firmware for AMD, Quantum, and VM Labs.

TECHNICAL SKILLS

- **Languages and tools:** C, x86 assembly, JavaScript, AI coding tools · **Spec-driven AI engineering:** design specs and agent instructions, parallel multi-agent development, automated test gates, code review of agent output
- **Embedded and systems:** BIOS and firmware from CPU reset, Windows device drivers, boot path · in-circuit emulators, logic analyzers, oscilloscopes

ENGINEERING EXPERIENCE

- **Phoenix Technologies**, Software Engineer (1988–1992): wrote motherboard BIOS firmware in C and x86 assembly used in millions of PCs from Toshiba, NEC, and Fujitsu, running from CPU power-on reset through the Windows boot loader; invented and shipped FastBoot and Save-To-Disk; debugged with in-circuit emulators, logic analyzers, and oscilloscopes.
- **Quantum**, Design Engineer (1992–1993): wrote the Windows device driver and hard-drive firmware for the Passport XL removable PC hard drive; wrote fault-tolerant code for 24/7 enterprise use, built to support 50,000+ hours MTBF.
- **Advanced Micro Devices**, Design Engineer (1994–1996): wrote Windows device drivers and firmware for the InterWave audio card; managed repeated integration of 13+ software components from a distributed team of 25+ engineers.
- **Metalithic Systems**, Programmer (1996–1998): wrote Windows device drivers for Digital Wings, an FPGA-based digital audio workstation; designed and iterated user-interface concepts for future products.
- **Spruce Technologies**, Senior Software Engineer (1998–2000): designed and delivered Plug-and-Play support for the Windows NT driver of the Spruce Dolby AC-3 audio card, and tuned driver performance for professional audio.
- **VM Labs**, Firmware Engineer (2000–2001): shipped DVD firmware for six NUON DVD/game systems from Toshiba, Samsung, and Panasonic, with a global engineering team on fault-tolerant firmware for high-volume products.

EXPERIENCE SINCE 2002

Egghead Rodeo (Partner) · Software Engineer & IT Support · 2022–Present (part-time)

- Built **Chantel's Corner**, a **live** online bookstore with 30,000 books (Rust, Axum, HTMX, PostgreSQL; chantelcorner.com), and Campus Watch, a personal Unity game in development.
- On-call Windows and macOS support for private clients: troubleshooting, OS restores, printers, and Office.

Other experience

- **Ventel Telephone**, contractor for AT&T (2023–2025): upgraded fiber-optic network routers at 22 cell phone tower sites across Southern California without interrupting service.
- **Light Hollywood LLC**, Owner and Director of Photography, Burbank (2003–2026): led crews of 20–40 on 200+ commercials and 11 features.
- **Bay Meadows Racetrack**, IT Support (2003): supported 500+ PCs on a Novell NetWare network.

AWARDS

- **Winner, IGN PSXPower Contest (1997)** for new game developers; prize was Sony's black PlayStation 1 development kit (Net Yaroze). [IGN article](#)
- **Best Cinematography, 168 Hour Film Festival (2006)**: film made start to finish in one week
- **Core Values Award, Per Scholas (2024)**: for Ambition, Integrity & Perseverance

EDUCATION

- **Maestro College**, A.A.S. in AI Software Engineering, GPA 4.0 (expected December 2027)
- **Per Scholas**, Software Engineer training course, Certificate of Completion, GPA 3.8 (2024); full scholarship, 400+ hours
- **University of Hawaii at Manoa**, Information and Computer Science, coursework (1985–1987)