

Thomas Watson

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TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, HTML/CSS

Developer Tools: Git, Docker, Podman, Claude Code, ActiveMQ, VS Code, Visual Studio, CLion

Libraries: Boost, PortAudio, pandas, NumPy, Matplotlib, PyTorch

EXPERIENCE

General Atomics Aeronautical Systems, Inc.

Sep. 2024 - Present

Software Engineer II

Poway, CA

- Architect autonomous flight skills and implement as C++ microservices on a team of 5+ engineers
- Maintain, debug, & optimize C++ codebases for aerial onboard deployment
- Perform software integrations between both internal and external codebases via ActiveMQ message brokering
- Interact with project stakeholders/customers to turn feedback into actionable feature updates, additions, & fixes

Jet Cutting Solutions, Inc.

Feb. 2024 - May 2024

Software Engineer Contractor

Rancho Cucamonga, CA

- Implemented AI tooling in Python to optimize manufacturing schedule, increasing production capacity by 18%
- Collaborated closely with engineering teams to ensure tooling aligns with real-world operational requirements

Viterbi School of Engineering

Aug. 2022 - May 2024

Teaching Assistant

Los Angeles, CA

- Taught and reinforced concepts for Introduction to Artificial Intelligence & Professional C++ courses
- Hosted office hours for C++ and Python projects & graded on small team for 300+ students

AArete

May 2023 - Aug. 2023

Software Engineer Intern

Chicago, IL

- Headed development of internal full-stack CRUD web application using MongoDB, Flask, Bootstrap, & jQuery
- Migrated client data from previous external database to above newly developed app, decreasing maintenance cost by 67%

EDUCATION

University of Southern California

Los Angeles, CA

Master of Science in Computer Science

May 2023 - Aug. 2024

- **GPA:** 3.66
- **Coursework:** Machine Learning, Deep Learning, Applied Natural Language Processing, Reinforcement Learning

University of Southern California

Los Angeles, CA

Bachelor of Science in Computer Science

Aug. 2020 - Aug. 2024

- **GPA:** 3.57
- **Coursework:** Data Structures and Object Oriented Design, Analysis of Algorithms, Internetworking, Computer Systems, Operating Systems, Artificial Intelligence, Full-Stack Web Development

PROJECTS

Real-Time Audio Server | C/C++, PortAudio, Socket Programming

Apr. 2026

- Developed a client and server program in C++ to communicate real-time audio from each client to all others
- Utilized PortAudio library to process microphone input into buffers and playback received buffers to speakers
- Serialized input audio buffers to send to server via C socket programming
- Designed server-side jitter buffer to mix same-time audio buffers from clients to relay for playback