

PETER LAW

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EDUCATION

University of Hawaii at Manoa

Honolulu, HI

- **Double Major:** Bachelor of Science, Computer Science and Mechanical Engineering **Expected May 2028**
- **Dean's List** Fall 2024 & Spring 2025, Academic Merit Scholarship | **3.95 GPA**

Sophia University

Tokyo, Japan

- **Study Abroad:** Green Engineering Program **Apr 2026 – Jul 2026**

PROJECTS

Stair-Climbing Robot – UH Engineering Competition (2nd Best in UH History)

Aug 2025 – Dec 2025

- Conducted mechanical design and fabrication of a stair-climbing robot through six iterations in three months
- Developed embedded control system using Arduino libraries, optimizing for reliable Bluetooth communication, efficient obstacle handling, and stable object collection
- Managed \$500 budget while building chassis, drivetrain, and climbing assemblies using aluminum CNC machining, wood laser cutting, and 3D printing.
- Placed 2nd out of 50+ UH Mechanical Engineering teams in competition history, excelling in speed, stability, and obstacle handling.

Hawaii Space Flight Laboratory (HSFL) Flight Software Volunteer

Aug 2025 – Present

- Supporting development of flight software for the Neutron-2 mission with NASA's F' (F Prime) framework
- Developing test harnesses and assisting with onboard computer resource allocation for embedded flight systems

Smoothed Particle Hydrodynamics Real-Time Simulation (C++, OpenGL)

Apr 2025 – Aug 2025

<https://github.com/lawpeter/FluidSim>

- Programmed a Lagrangian fluid simulation, prioritizing particle count and simulation speed
- Wrote shader programs to render the results of the fluid simulation in real-time (GLSL, GLFW)
- Optimized code from rendering 1600 particles at <10FPS to 290,000+ at 35 FPS using C++, GLSL, and GLM

WORK EXPERIENCE

Information Technology Student Assistant

Oct 2024 – Present

University of Hawaii at Manoa

Honolulu, HI

- Troubleshoot software, hardware, and networking issues via phone, chat, and email
- Create, update, or resolve an average of 150 tickets/month (20% higher than average) on the ITSM platform
- Collaborate with a team of 35 to provide assistance to 60,000 faculty, staff, and students of the UH community
- Assist with the continuous monitoring of 6,000 systems, services, and applications for the University

SKILLS

Programming Languages: C/C++, Java, SQL, GLSL, Python

Libraries/Frameworks: GLFW, GLAD, GLM, ImGui, F Prime (NASA)

Concepts: Data Structures, OOP, Real-Time Simulation, GPU Programming, Embedded Systems

Academic Foundations: Numerical Analysis, Algorithms, Thermodynamics, Database Systems