

EDUCATION**University of Hawaii at Manoa**
*Bachelors of Science in Computer Science*May 2025
GPA: 3.98**WORK EXPERIENCE****University of Hawaii at Manoa****Honolulu, Hawaii***TA: ICS 361: AI Programming, 211: Algorithms and Data Structures, 111: Introduction to CS*

Jan 2024 – May 2025

- Taught classes of 30+ students covering AI techniques, algorithmic complexity, and software design.
- Collaborated with professors to transform learning goals into results and improve student support.

Hawaii Digital Health Lab**Honolulu, Hawaii***Data Science Intern*

May 2024 – August 2024

- Worked with advanced Graph Attention Networks in supporting ASD detection through eye-tracking data.
- Applied data preprocessing techniques like Synthetic Minority Oversampling and noise filtering.
- Improved base GNN model from a baseline accuracy of 60% to 90%, by enhancing the model and data.
- Developed deep learning pipeline to anonymize faces in video while preserving key features for ML training uses.
- Conducted experiments on various emotion lexicons to evaluate their impact on LLMs (LLAMA 2, GPT-4, FLAN-T5) for enhancing emotion recognition in therapy. Published: <https://www.mdpi.com/2673-2688/6/3/56>

ISEC Society**Honolulu, Hawaii***Full Stack Developer*

March 2023 – May 2024

- Worked as full stack web developer maintaining and updating websites using PHP, HTML, cPanel, Python, and JavaScript for managing international conferences and publishing research papers.
- Automated many manual administrative tasks, including invoice generation and distribution.
- Worked with stakeholders to turn unclear requirements into practical and efficient software solutions.

PROJECTS**monoFish: Monocular Fish Dimension and Volume Estimation with Deep Learning****May 2025**

- Designed an end-to-end pipeline to accurately estimate the length and volume of a fish from a single image.
- Developed scale-aware object detection using YOLOv11, depth estimation, and geometric calibration.
- Architected a back-projection workflow using camera intrinsics to compute fish dimensions via 3D convex-hull.

EduGEN AI – HDS AI Hackathon [2nd place]**April 2025**

- Designed a content generation pipeline using Google Vertex AI to produce educational videos with AI-generated scripts, voiceovers, animations, thumbnails, quizzes, and automated uploads to Google Cloud Storage.
- Mitigated issues with prompt reliability, LLM output validation, and animation sync to improve stability.
- Containerized production deployment using Docker Compose for isolated and reproducible environments.

Language Modeling from Scratch ([Github](#))**January 2025**

- Implemented a *GPT-2*-like transformer language model from scratch using only PyTorch math modules.
- Optimized performance of attention mechanisms, data preprocessing, model finetuning, and training on multi-gpu.

WRENCH Simulation Framework - Serverless Computing Simulation ([Github](#))**January 2025**

- Enhanced HPC distributed systems simulation framework by integrating serverless simulations in C++.
- Engineered event-driven workflows to model serverless functions in large-scale distributed systems.
- Conducted performance trade-off analysis between serverless and traditional HPC scheduling strategies.

GigaCharge - Electric Car Charging Companion App ([Github](#))**November 2024**

- Developed a proof-of-concept mobile app for EV users to connect and arrange spot swapping privately.
- Implemented license plate lookup and real-time chat for seamless user communication and coordination.
- Integrated real-time maps, queues, and spot availability tracking, improving charging station efficiency.

University of Hawaii “AskUs” - AI Chatbot ([Github](#))**October 2023**

- Developed an AI chatbot with LangChain and LLAMA2, leveraging 2,000+ UH ITS articles for accurate context.
- Hosted the chatbot locally to ensure data privacy in accordance with UH Information Security regulations.

ETS URL Shortener – HACC 2022 [1st Place] ([Github](#))**October 2022**

- Created a secure URL shortener for the State of Hawaii to replace existing insecure processes.
- Allows state employees to securely create and share shortened URLs; built using React/TypeScript.

COMMUNITY INVOLVEMENT**President - Programming and Algorithms Club @ UH Manoa**

Honolulu, HI (August 2023 - May 2025)

TECHNICAL SKILLS

JavaScript, TypeScript, Python, SQL, Java, C/C++, React/Next.JS, Tensorflow, Pytorch, Firebase, Docker, PostgreSQL, Cloudflare, Google Cloud Platform, Concurrent Programming