

Young yet experienced local software engineer looking to bring my skills and passion for programming to the workforce back home in Hawaii.

Education

Purdue University, B.S. in Computer Science

Concentration in systems programming

August 2023 – May 2025

West Lafayette, IN

Work Experience

VICEROY Maven Program, Griffiss Institute

Research Intern

Sep 2018 - Present

Rome, NY

- ◆ Participated in cybersecurity lectures and lessons with various Department of Defense (DoD) personnel on Air Force and DoD-oriented cyber missions.
- ◆ Was selected to represent VICEROY and P3I at the Pentagon in a meeting with HON Shyu (OUSD(R&E)) and dialogued with the offices of Hawai'i's senators and congressmen/women in Washington DC.
- ◆ Worked on a research project with the Air Force Research Lab.

Applied Research Laboratory at the University of Hawai'i

Software Developer Asst. / Intern

Summer 2023

Kihei, HI

- ◆ Collaborated on a team researching new technologies for portal software for the DoD's vanguard high performance computing center.
- ◆ Developed backend software for a mock central administration platform for managing containerized software on servers and swarms with Python, Flask, and Docker.

Data Science Labs, Calculus II

Lab Instructor

Jan. 2023 – Dec. 2023

West Lafayette, IN

- ◆ Taught students to apply concepts from Calculus I and II to basic data science problems in a lab setting using Jupyter notebooks, Python, Raspberry Pis, and various prototyping electronic components.
- ◆ Collaborated with other instructors and superiors to develop and refine the course curriculum.

The Data Mine, Purdue University

Undergraduate Data Science Researcher

Aug. 2023 – May 2024

West Lafayette, IN

- ◆ Collaborated with Raytheon Technologies to create a hard drive remaining-useful-life prediction model.
- ◆ Applied data science techniques such as anomaly detection, k-means clustering, LSTM models, etc.

Projects

- ◆ **PBF Leadership Dashboard** – Designed and developed a full-stack administrative platform for PBF, my church's college ministry, to streamline event planning and team coordination. We collaborated with the ministry to gather requirements and deliver a professional product using Vite/React, Python, and MySQL.
- ◆ **Docker Dash** – A proof-of-concept dashboard for administrators to manage containerized applications on a server/cluster. I worked on the backend of this web app during my internship at ARL Maui, implementing and documenting a REST API for interfacing Docker using Python and Flask.
- ◆ **LilDB** – A WIP relational DBMS written from scratch in Rust, with concurrency and memory safety.
- ◆ **FactoryScript** – An interpreted esolang (esoteric programming language) themed around factories, built as a fun hobby project. Programs (*factories*) are graphs with nodes (*stations*) connected by Unicode box characters (*conveyor belts*). Interpreter implemented with Rust.
- ◆ **Circuit Court** – A prize-winning Jackbox-style game where you play as the prosecutor or the defense fighting an AI-generated legal case to an LLM judge to try to sway its verdict in your favor! Made with React, Python and a selfhosted Llama 3-8B instance in 36 hours for the Boilermake XII hackathon.

Read about these projects and more at jaxsonp.com/projects. Sources on my GitHub.