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Jaxson Pahukula

Maui, HI
www.jaxsonp.com

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 — **August 2023 – May 2025 (Exp.)**
Concentration in systems programming — West Lafayette, IN

Work Experience

VICEROY Maven Program, Griffiss Institute — **Sep 2018 - Present**
Research Intern — 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 — **Summer 2023**
Software Developer Asst. / Intern — 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 — **Jan. 2023 – Dec. 2023**
Lab Instructor / TA — 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 — **Aug. 2023 – May 2024**
Undergraduate Data Science Researcher — 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

- **University Simple C Compiler -** A top-down, recursive descent compiler for University Simple C (an LL(1) toy subset of C) developed in C++. Utilizes LLVM IR with various custom optimization passes. Made for Purdue's CS 35200, a compilers class.
- **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.
- **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.
- **Cubegame –** A Minecraft clone written in Rust, features a custom render pipeline and (WIP) multiplayer.
- **Beat Ballot –** A full-stack web app where users collaboratively create real Spotify playlists with friends, voting on songs to add and remove. Made for a hackathon in 36 hours with React, Python, and SQLite.

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