

# JAXSON PAHUKULA

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## EDUCATION

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### Purdue University

Pursuing B.S. in Computer Science, systems programming concentration

West Lafayette, IN

Aug. 2022 – May 2025 (est)

## EXPERIENCE

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### Griffiss Institute, VICEROY Maven Program

Summer 2024

Research Intern

Rome, NY

- Participated in cybersecurity 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 Dev 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
- Led students in engaging lab projects 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 various data science procedures and techniques such as anomaly detection, k-means clustering, LSTM models, and more.

## PROJECTS

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### DIY Graphics Rendering Pipeline | C++

- A software renderer with mesh rendering, lighting, texture mapping, reflections, and more.
- Written fully from scratch for Purdue's CS33400, a graphics programming class.

### FactoryScript | Rust

- An interpreted, dynamically-typed, gag programming language (esolang) themed around factories.
- Programs (*factories*) are graphs with nodes (*stations*) connected by Unicode box characters (*conveyor belts*).

### University Simple C Compiler | C++, LLVM

- A top-down recursive descent compiler written for Purdue's CS 35200, a compilers class.
- Compiles University Simple C, an LL(1) toy subset of C, to LLVM IR with various custom optimization passes.

### Beat Ballot | React, MUI, SQLite, Flask

- A web app where users create collaborative Spotify playlists with friends, voting on songs to add or remove.
- Created for a hackathon (Boilermake XI) in 36 hours.

**And more...** Read about them at [jaxsonp.com](http://jaxsonp.com)

## TECHNICAL SKILLS

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**Languages:** Python, C, Rust, C++, Java, Javascript, HTML/CSS, SQL, R

**Dev Environments/Tools:** Git, Docker, UNIX, Jupyter, Visual Studio, IntelliJ

**Libraries:** React, Flask, NumPy, Matplotlib, Pandas