Jack Hogan

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WORK EXPERIENCE

SUMMER 2024

Leidos Innovation Center
Software Engineering Intern

- Created and refined GPU-based signal processing algorithms in **CUDA**, **Rust**, and **Python** for real-time applications
- Created real-time **machine learning** system to lock onto hidden radar targets with **PyTorch**

SUMMER 2023

Peraton
Software Engineering Intern

- Led the expansion of **ServiceNow**'s new **Artificial Intelligence** module using **JavaScript** and Document Intelligence including custom input, parsing, and customer interfaces
- Authored and presented a whitepaper on systems and processes developed while managing daily standups with the intern team

2024 – PRESENT

Purdue Hackers
Engineering Division Lead

Overseeing all engineering project at Purdue Hackers, managing time and budget restrictions while keeping all other engineering officers on pace. Spearheading and managing all infrastructure related to our Passports initiative, including the authentication and management systems written in **Rust** and **TypeScript**.

2023 – PRESENT

Purdue Orbital
Avionics Design Lead

Leading a team of over fifteen people working to create a custom fault-tolerant and compact system to activate rocketry systems while collecting data for avionics missions with **Rust**.

2020 – 2023

Alluja LLC
Founder

Alluja LLC is a dynamic startup involved in multiple technical projects and initiatives including mobile apps written in **SwiftUI**, libraries in **Swift** and **Rust**, backend servers in **Rust** and **Python**, frontends in **Svelte** and **Leptos**, and BetterDiscord plugins in **TypeScript** with over 5,000 users.

EDUCATION

2022-2026 **Bachelor of Science Candidate**
Purdue University Honors College
Double Major: Computer Science & Artificial Intelligence
Minor: Mathematics
3.6 GPA

RESEARCH

"Detecting Source Code Plagiarism in Submitted Assignments"

Selected for faculty research position leading a group of five focused on developing solutions for source code plagiarism in the Purdue Computer Science program . Research areas include Abstract Syntax Trees, source code lexing and parsing, and machine learning.

PROGRAMMING LANGUAGES

BACKEND	Java, C#, Python, SQL, MongoDB
FRONTEND	Swift, Kotlin, Svelte, JavaScript, TypeScript, HTML, CSS
LOW-LEVEL	Rust, C, C++

FRAMEWORKS

BACKEND	SvelteKit, Django, Actix Web, Flask, Spring Boot, Express
FRONTEND	SwiftUI, UIKit, Jetpack Compose, React, Svelte, Leptos
LOW-LEVEL	GStreamer, Unix, Systemd, PulseAudio, CUDA, CUTLASS
AI/ML	NumPy, PyTorch, Pandas, Burn, SciPy

PLATFORMS & SERVICES

- AWS EC2, ECS, S3, etc.
- Docker, Docker Compose

RECOGNITION

2022 **Outstanding Graduate in Technology**
Chantilly High School (1550 SAT)

CLUBS & ASSOCIATIONS

- Purdue Orbital
- Purdue Hackers
- Purdue University Ski & Snowboard Club
- Boiler Book Club
- Purdue Theme Park Engineering & Design
- Mensa International