Jack Hogan

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WORK EXPERIENCE

SUMMER 2024 (FT)

Leidos Innovation Center
Software Engineering Intern

- Created and refined GPU-based signal processing, radar, and **machine learning** algorithms in **CUDA** and **PyTorch** for real-time applications
- Developed bridging technology between **Python** and **C++** codebases

SUMMER 2023 (FT)

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
- Developed and presented a whitepaper on the systems and processes developed while managing daily standups with the intern team to coordinate activities, leverage cross-functional learning, and track deliverables

2023 – PRESENT (PT)

Purdue Orbital
Avionics Design Lead

Using my knowledge of distributed systems and aeronautics, I lead a team working to create a fault-tolerant and compact system to activate various rocketry systems while collecting data for assorted launch missions.

2024 – PRESENT (PT)

Purdue Hackers
Passport Infrastructure Officer

Purdue Hackers is a team of passionate Purdue students working to create creative technical projects. I manage all of the infrastructure related to our Passports initiative, including the authentication and management systems written in **Rust** and **TypeScript**.

2020 – PRESENT (PT)

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
3.54 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, SNS, SQS, Rekognition, SES, Cloudfront, Route 53, ALB, VPC, DocumentDB, IAM, PrivateLink
- Docker, Docker Compose

AWARDS

2022 **Outstanding Graduate in Technology**
Chantilly High School

CLUBS & ASSOCIATIONS

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