Jack Hogan

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WORK EXPERIENCE

SUMMER 2024 (FT)

Leidos Innovation Center
Software Engineering Intern

- Created and refined GPU-based signal processing and **machine learning** algorithms in **CUDA** 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 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, machine learning, and artificial intelligence.

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