Jack Hogan

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WORK EXPERIENCE

2020 – PRESENT

Alluja LLC
Founder and CTO

Alluja LLC is a dynamic startup involved in multiple technical projects and initiatives including:

- KnokKnok, a mobile application with over 1,000 users. KnokKnok incorporates a sophisticated front end UX/UI in **SwiftUI**, a web front end in **Svelte**, patent-pending cross-block technology, an API to multiple external services, and backend data handling in **Python**.
- Alluja WebSockets for macOS, written in **Swift**
- Multiple plugins for BetterDiscord, all written in **Java/TypeScript** with over 5,000 users
- A pipeline-based WebRTC library written in **Rust**

2023

Peraton
Software Engineering Intern

Worked on various production-grade projects using **AI**, **ServiceNow**, and **JavaScript**.

2023 – PRESENT

Purdue Orbital
Avionics Design Lead

Purdue Orbital is a space team working to create a rocket launch system with the eventual goal of being the first independent college organization to put a satellite in space. 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. I also work with other Design Leads and the Chief Engineer to improve workflows throughout Purdue Orbital and to increase recruitment targeting Computer Science majors.

EDUCATION

2022-2026 **Bachelor of Science Candidate**
Purdue University Honors College
Double Major: Computer Science & Artificial Intelligence
Minor: Mathematics
JUNIOR STANDING, 82 CREDITS

2019-2022 **Advanced Diploma**
Chantilly High School
HONORS GRADUATE

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, similarity analysis, tree theory, and graph theory.

PROGRAMMING LANGUAGES

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

FRAMEWORKS

BACKEND	SvelteKit, Django, Actix Web, Flask, Spring Boot, Express
FRONTEND	SwiftUI, UIKit, Jetpack Compose, React, Svelte
SYSTEM	GStreamer, Unix, Systemd, PulseAudio

PLATFORMS & SERVICES

- AWS EC2, ECS, S3, SNS, SQS, Rekognition, SES, Cloudfront, Route 53, ALB, VPC, DocumentDB, IAM, PrivateLink
- Docker, Docker Compose
- Jira

AWARDS

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

CLUBS & ASSOCIATIONS

- Purdue Orbital
- Purdue SIGAPP
- Purdue Hackers
- Purdue University Ski & Snowbard Club
- Boiler Book Club
- Mensa International