





Jack Hogan



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WORK EXPERIENCE

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 back-end 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**

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.

Fixit Solutions

Founder

Technology service company for repair of computers, tablets, laptops, mobile phones, TVs, and game consoles. Also provided data recovery, software troubleshooting, custom computer builds, and security assessments.

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

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

AWARDS

- 2022

Outstanding Graduate in Technology
Chantilly High School
- 2021

Provisional Patent 63183035 for KnokKnok
USPTO

CLUBS & ASSOCIATIONS

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