Jack Hogan

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 - 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.

2018 - 2022

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



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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

sysтем 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 & Snowbard Club

Boiler Book Club

· Mensa International