# 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

#### Peraton

# **Software Engineering Intern**

Worked on various production-grade projects using the **ServiceNow** platform 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

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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

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