

# Jack Hogan

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Double major in Computer Science and Artificial Intelligence with extensive experience in software engineering, AI/ML, and leadership roles in tech organizations.

## Education

<b>Purdue University Honors College</b> <i>Bachelor of Science Candidate in Computer Science, Artificial Intelligence; Minor: Mathematics</i> <ul style="list-style-type: none"><li>3.75 GPA, 1550 SAT</li><li>Relevant Coursework: Data Structures, Machine Learning, AI, Analysis of Algorithms, Abstract Algebra</li></ul>	Fall 2022 — Spring 2026 West Lafayette, IN
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## Work Experience

<b>Leidos Innovation Center</b> <i>High-Performance Software Intern</i> <ul style="list-style-type: none"><li>Created and refined GPU-based signal processing algorithms in CUDA, Rust, and Python for real-time applications.</li><li>Developed a real-time machine learning system to lock onto hidden radar targets using PyTorch.</li></ul>	Summer 2024 — Present Arlington, VA
<b>Peraton</b> <i>Software Engineering Intern</i> <ul style="list-style-type: none"><li>Expanded ServiceNow's Artificial Intelligence module using JavaScript and Document Intelligence.</li><li>Authored and presented a whitepaper on systems and processes developed, managing daily intern standups.</li></ul>	Summer 2023 — Present Chantilly, VA
<b>Alluja LLC</b> <i>Founder</i> <ul style="list-style-type: none"><li>Leading multiple technical projects, including mobile apps (SwiftUI), libraries (Swift, Rust), backend servers (Rust, Python), frontends (Svelte, Leptos), and BetterDiscord plugins with 5,000+ users.</li></ul>	2020 — Present Chantilly, VA

## Research & Leadership

<b>Detecting Source Code Plagiarism in Submitted Assignments</b> <i>Lead Researcher</i> <ul style="list-style-type: none"><li>Leading a faculty-selected research team focused on solutions for source code plagiarism in Purdue's Computer Science program.</li><li>Researching Abstract Syntax Trees, source code lexing and parsing, and machine learning techniques.</li></ul>	Spring 2023 — Present West Lafayette, IN
<b>Purdue Hackers</b> <i>Engineering Division Lead</i> <ul style="list-style-type: none"><li>Overseeing all engineering projects, managing time and budget restrictions while keeping engineering officers on pace.</li><li>Managing the infrastructure for the Passports initiative, including authentication and management systems written in Rust and TypeScript.</li></ul>	Jan 2024 — Present West Lafayette, IN
<b>Purdue Orbital</b> <i>Avionics Design Lead</i> <ul style="list-style-type: none"><li>Led a team of 15+ members to create a custom fault-tolerant system for rocketry systems.</li><li>Developed systems for collecting data for avionics missions using Rust.</li></ul>	Jan 2023 — Jan 2025 West Lafayette, IN

## Skills & Associations

- Programming Languages:** Java, C#, Python, SQL, MongoDB, Swift, Kotlin, Svelte, JavaScript, TypeScript, HTML, CSS, Rust, C, C++
- Technologies:** SvelteKit, Django, Actix Web, Flask, Spring Boot, Express, SwiftUI, UIKit, Jetpack Compose, React, Leptos, GStreamer, Unix, Systemd, PulseAudio, CUDA, CUTLASS, NumPy, PyTorch, Pandas, Burn, SciPy, Astro
- Platforms:** EC2, ECS, S3, Docker, Docker Compose
- Associations:** Purdue Orbital, Purdue Hackers, Purdue University Ski & Snowboard Club, Boiler Book Club, Purdue Theme Park Engineering & Design, Mensa International