Wesley Hu

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Education

Georgia Institute of Technology, *B.S. in Computer Science*, Concentrations in Information Internetworks and Intelligence, Minor in Robotics   Aug 2023 – Present
- **Status:** Third Year
- **GPA:** 3.94/4.0
- **Relevant Coursework:** Algorithms, Linear Algebra with Abstract Vector Spaces, Databases, Perception, Machine Learning, Probability and Statistics, Computer Systems and Networks

Experience

Software Engineering Intern, MITRE – McLean, VA   Jun 2025 - Present
- Developed low-cost, attritable autonomous unmanned systems with unmanned ground vehicles (UGVs) to address capability gaps for US military and law enforcement.
- Architected and built the full autonomy stack, integrating vision language models (VLMs), agentic RAG pipelines, and object detection models into a post-mission processing pipeline.
- Designed and implemented satellite-based navigation: obstacle detection from imagery, real-time GUI editing, and dynamic path planning in partially observable environments.
- Engineered unmanned vehicles and edge computing platforms from the ground up. Integrated edge autonomy across the unmanned system network; conducted live field testing and demonstrations.
- Competed in an embedded security CTF, using Ghidra for reverse engineering, firmware and binary analysis to exploit and remotely control an IoT door lock.

CS2340 Objects and Design UTA, Georgia Tech – Atlanta, GA   Jan 2025 - May 2025
- As the UTA of CS2340, I help students learn how to work in team environments as software engineers.
- Guided teams with Agile methodologies and DevSecOps, enabling effective CI/CD implementation with Jira and Git.

Software Engineer, Experimental Flights VIP – Georgia Tech   Jan 2024 - May 2024
- Researched Tello drones controlled by a central Raspberry Pi for autonomous warehouse inventory tracking.
- Implemented manual flight controls, live video streaming, and automated barcode scanning for real-time inventory.

Projects

Viper Vision, AI ATL Hackathon   devpost.com/software/viper-view Nov 2025
- Developed Viper Vision, a low-cost VR/AR system inspired by Anduril Eagle Eye for real-time situational visualization.
- Engineered a hybrid on-prem inference pipeline with optional telemetry server, enabling more computationally intensive CV models when available.
- Integrated FLIR thermal imaging overlays with dynamic visual mode switching for enhanced awareness.
- Built an on-device voice command interface (Android STT) for hands-free zoom, mode selection, and navigation.

Tryon-AI, HackGT Hackathon   devpost.com/software/tryon-ai-5lbjct Oct 2025
- Built a virtual changing room with Google's Nano-Banana model to generate realistic outfit visualizations.
- Implemented end-to-end image processing pipeline and customization interface enabling users to preview creative fits.

Truckin AIP   July 2025
- Built an AI-assisted fleet management platform on Palantir Foundry to monitor and optimize trucking operations.
- Integrated Kafka for real-time ingestion of telemetry data from IoT-equipped trucks; designed ETL pipelines to clean, transform, and structure incoming data.
- Developed an AI agent using Palantir AIP to analyze fleet data and assist operators with decision-making and automated actions.

Agiler, AI ATL Hackathon   devpost.com/software/projo Dec 2024
- Built a project management tool that uses LLMs to analyze meeting notes and recordings to automatically update and create user stories and tasks in the backlog whenever necessary. The tool enforces good project management practices and cuts down on manual busy-work.

Technologies

Languages: Python, Java, Node.js, React.js, Next.js, TypeScript, HTML, CSS, Tailwind CSS, C, C++, Assembly, SQL/noSQL Databases

AI/ML: CNN, LLM, VLM, OpenCV, TensorFlow, PyTorch, Hugging Face, SkLearn, Numpy, Pandas, CUDA, Agentic AI (LangChain and LangGraph), RAG Pipeline Design, Reinforcement Learning, Edge Computing, Vector Stores

Software/Tooling: Docker, WSL/Linux, Redis, FastAPI, MAVLink, Figma, Ardupilot, Reverse Engineering (Ghidra)

Cloud CI/CD Platform: AWS, Cloudflare, GCP, GCR, Git, Jira, Confluence, Git Actions

Hardware: Breadboard, Soldering, Arduino, Raspberry Pi, UAV, UGV, Computational Hardware, CAD