Wesley Hu

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Education

Georgia Institute of Technology, *B.S. in Computer Science*, Concentration 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

- Developing low-cost, attritable autonomous UAVs and UGVs at the MASE Small Robotics Lab to address capability gaps identified by the US Military in areas of Force Protection (FORPRO) and Counter-Unmanned Systems (C-UxS).
- Designed and architected the full autonomy stack, integrating Vision-Language Models (VLMs), agentic AI and RAG pipelines, and reinforcement learning models for robust, real-time edge deployment across UAVs and UGVs.
- Built UGVs, UAVs, and edge compute platforms from the ground up. Integrated autonomy across the unmanned system network and tested field deployment and live demonstrations for program sponsors.

CS2340 Objects and Design UTA, Georgia Tech – Atlanta, GA — Jan 2025 - Present

- 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

- Worked in the Inventory Management sub-team researching the usage of drones for inventory management.
- Built Python scripts to connect multiple Tello drones via a central Raspberry Pi, enabling manual navigation and video streaming with UDP, MAVLink, and Ardupilot
- Implemented basic flight paths, automatic QR/barcode scanning to enable autonomous and accurate inventory logging in warehouses.

Projects

Agiler, AI ATL Hackathon — devpost.com/software/projo Dec 2024

- Built a project management tool that uses LLMs to analyze meeting notes/recordings to automatically update and create user stories and tasks in the backlog whenever necessary. Our tool enforces good project management practices and cuts down on manual busy-work.
- We used React, FastAPI, Python, Gemini API, Claude API, Docker, and GCR to build and deploy in two days.

Colorspace Change of Basis — Jan 2024

- Used linear algebra concepts in NumPy to change the RGB basis of an image and uses least squares solution when less than three colors form the basis.
- Allowed for unique image filters and bring out previously unnoticeable details useful for image forensics and preprocessing in ML pipelines.

Automated Real-Time Stock-Market Analyzer — Oct 2024

- Enabled a net portfolio gain of **+24%** from January to April 2025 despite a period of poor global market performance.
- Originally developed in 2021, a recent 2024 system redesign automated scheduling, introduced automatic alert mailing, and implemented a redesigned pattern recognition algorithm.

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, 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

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

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