

Christopher Lenhardt

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EDUCATION

Georgia Institute of Technology

Spring 2027

Bachelor of Science in Computer Science

Atlanta, GA

- Threads in Information Networks and Artificial Intelligence
- Relevant Coursework: SQL Databases, Intro to AI, Intro to Software Development, Data Structures, Multi-variable Calculus, Computer Organization and Programming, Design and Analysis of Algorithms, Privacy Technology Policy Law

EXPERIENCE

Software Developer CO-OP

January 2024 - Present

Georgia Tech Research Institute - Applied Systems Laboratory

Atlanta, GA

- Designing and developing software for Golden Horde Autonomy, an SDK for heterogeneous collaborative UAV swarms
- Developed a containerized command and control ground station full stack app for cross platform rich interaction with vehicle swarm using Cesium map visualizer API and flask, among other technologies
- Developed an automated swarm command tool that utilizes google protobuf messages and pydantic models to emulate field use in test cases for hardware in the loop tests
- Testing and review of merge requests of autonomy source code
- Maintaining and initializing server hardware to support hardware tests and closed network inter connectivity between workstations using devices such as Nvidia Jetsons, power relays, switches, etc

Automated Flight Controls Developer

August 2024 - Present

Experimental Flights V.I.P

Atlanta, GA

- Design, develop, and implement autonomous flight control algorithms for UAVs in warehouses to track inventory and recharge without human intervention
- Utilizing onboard visual sensors to scan QR codes to update an inventory management database
- Integrating onboard sensors to support autonomous navigation and obstacle avoidance

PROJECTS

XOR Neural Network | *Minitorch, Python, Jupyter Notebook*

June 2025

- Developed a neural network using a stripped down version of pytorch to demonstrate understanding of machine learning fundamentals
- Created source code that processes backwards propagation, different layer modules (Linear, Sigmoid, Softmax), and the mean squared error criterion
- Trained in thousands of iterations to reduce error to almost 0 based on a large repeating set of XOR data

HealthTrack | *Android Studio(Java), Firebase, Git*

May - July 2024

- Github link: https://willbarnes20.github.io/CS2340A_Team3/
- Applied various design patterns and object-oriented principles, highlighting an understanding of sustainable and efficient software design including but not limited to Singleton, Observer, and Factory design patterns
- Maintained user accounts and data in the cloud using Google Firebase Realtime Database using principles of NoSQL
- Contributed over 70 commits and 2,000+ lines of code across the course of 4 collaborative sprints including daily scrums

BlackBox | *React, Express, DenoKV, Deno, Git*

April 2024

- Developed a full-stack web application using React as the frontend with a REST API stored using DenoKV
- Created an app to promote the development of professionals in tech from disadvantaged communities
- Won 3rd Place at Georgia Tech's BSCO hackathon

TECHNICAL SKILLS

Languages: Java, Python, C/C++, TypeScript, HTML/CSS, Cisco CLI, LC2200 LC3 Assembly

Certifications: CompTIA Security+, TestOut Security and Network Pro

Tools: Git, Gitlab, Visual Studio, WireShark