

Bryce Hanna

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Education

Georgia Institute of Technology

Atlanta, GA

Bachelor of Science in Computer Science

Expected Graduation December 2026

Concentration: Systems & Architecture and Theory

GPA: 4.0/4.0

Skills

Languages: Python, TypeScript, C#, Java, Lua, JavaScript, C/C++, Rust, SQL, Assembly

Technologies: ZeroMQ, Software Defined Radio (SDR), Protocol Buffers, Redis, OpenCV, Pydantic, React, SQLite, Qt

Developer Tools: Bash/Shell scripting, Git, Docker, GNU Radio, Gitlab CI, Conda, Unity, GCP, (Neo)vim, systemd, udev

Experience

Georgia Tech Research Institute

May 2025 - August 2025

Software Engineering Intern (Spectrum Warfare Operations and Research Division)

Smyrna, GA

- Redesigned the Threat Sensor Emulator (TSE) radar simulator with threading and protobuf API with 1 GB/s throughput
- Increased performance of CFAR detection algorithm by 30x using vectorized numpy operations and numba JIT compiling
- Automated distribution of TSE via PyInstaller, Conda, and Gitlab CI for 4 operating systems building 3 internal packages
- Architected a GPS activated deception program with 50 configurable options over 3 techniques on a UHD Software Defined Radio spanning 56 MHz of bandwidth using Python multiprocessing, HTML, and ZMQ

Profisee

May 2023 - December 2023

Software Engineering Intern

Alpharetta, GA

- Utilized C# and SQL to develop and test the Common Data Platform to standardize database access for microservices
- Applied SwaggerAPI to create a REST API endpoint for the File Attachment Service to allow file uploads to platform
- Created over 100 unit and integration tests to ensure production code quality and patched dozens of bugs in the process

Educational Computer Science YouTube Channel (@BRicey)

March 2020 - Present

Technical Content Creator, Editor, and Relations Manager

- Script, record, and edit programming tutorials on advanced concepts in the Roblox Studio Game Engine contributing to over 45 million game visits for my subscribers
- Educate an audience of more than 15,000 subscribers with over 2 million total views on essential CS concepts
- Analyze retention data to increase content interactions to reach an annual revenue of over \$1,500

Projects

Intuitive Navigation Assistance from an Active Wearable Exoskeleton | Python, GPS, Linux

March 2025 - Present

- Architected a multithreaded Python project on a raspberry Pi to navigate user through exoskeleton movements
- Orchestrated Camera, IMU, GPS, and high-powered leg-mounted motors using RedisDB, web sockets, and gpsd
- Extensively tested GPS and camera integration to reduce interference and errors by 50% using a custom web dashboard

XR Treatment for Age-Related Macular Degeneration (AMD) | Unity, C#, Typescript, React

August 2024 - Present

- Leverage Meta XR SDKs to track eye movement 120 times a second in Unity to diagnose and treat AMD
- Develop a game with 2 tests and 1 training scene to identify and reinforce a preferred retinal locus
- Designed a web dashboard using React, Apache, and SQLite to visualize test results for doctors at Emory University

Leadership

School of Computing Instruction at Georgia Tech

July 2024 - Present

CS 2110 Undergraduate Teaching Assistant

Atlanta, GA

- Instruct a classroom of 50 students on circuit logic, computer architecture, assembly, C programming, and more
- Assist hundreds of students in office hours to facilitate mastery through personalized teaching techniques
- Create and debug teaching tools such as circuit/assembly simulators and autograders to aid student learning

Flowers Invention Studio

May 2024 - Present

Prototype Instructor / Woodworking Apprentice

Atlanta, GA

- Instruct hundreds of makerspace users on woodworking, metalworking, 3D printing, and more to realize their project ideas
- Maintain and service tens of tools in the shop, cleaning and fixing where needed in order to optimize operations
- Fabricate woodworking and wood turning projects such as cutting boards and bowls to become a Wood Room Master