Christopher Coombes

Boston, MA

(518) 769-9669
cjbcoombes@gmail.com
github.com/cjbcoombes
linkedin.com/in/cjbcoombes/

EDUCATION

Northeastern University — Boston, MA Sep 2023-Present

Khoury College of Computer Sciences

Major: Candidate for a B.S. in Computer Science and Mathematics (Expected May 2027)
Honors: 4.0/4.0 GPA, Honors Program, Dean's List, Honors Scholarship
Courses: Grad-level Algorithms, Object Oriented Design, Adv. Linear Algebra
Activities: Treasurer of Husky Competitive Programming Club, member of Outing Club and Math Club

Queensbury High School — Queensbury, NY Sep 2019-Jun 2023

Honors: Valedictorian, International Baccalaureate Programme Diploma
Activities: President of Math Club, member of National Honor Society

COMPUTER KNOWLEDGE

Languages: C++, Java, C#, JavaScript, Python, Haskell, Rocq, CSS, HTML
Software: Visual Studio, VSCode, Git, GitHub, IntelliJ IDEA

EXPERIENCE

Student Feedback System Research Project — Python, OpenAI, Git Jan 2024-Jan 2025

- Launched a research project with a professor to provide LLM feedback on student code
- Prototyped in Python a system to parse submissions, fetch LLM API feedback, and present results
- Deployed to 500+ students in 1st year CS classes, with active feedback-driven development
- Published a paper (https://dbp.io/pubs/2025/feedbot.pdf) finding quantitative benefits for students

Engineering a Compiler From Scratch — C++, Git May 2022-Dec 2024

- Developed compiler components from the ground up, including a custom assembly language and parser
- Leveraged idiomatic C++ with focus on safe memory management
- Applied advanced data structures (extensively trees) to manage data effectively

WORK EXPERIENCE

Lead Software Developer — ShepherdXR, Boston, MA Jan 2025-Jun 2025

- Developed a VR mathematics education platform codebase from scratch using Unity/C# and OpenXR, implementing 180 classes and 21k lines of code as lead developer
- Designed a state machine architecture and event system for modular implementation of core gameplay
- Engineered a 3D math rendering engine turning LaTeX strings into interactive animated equations
- Built a system recognizing six hand gestures from raw XR tracking data, including denoising and correction for false positives and ambiguous cases

Course Teaching Assistant — Northeastern University, Boston, MA Sep 2024-Dec 2024

- Maintained an automated feedback/grading toolchain using Python and Racket
- Led a weekly lab and held 5 weekly office hours, developing communication skills in CS concepts

Volunteer Tutor— 826 Boston, Boston, MA Sep 2023-Jun 2025

- Tutored high school students weekly in STEM topics at 826 Boston, a Roxbury nonprofit