Sean S. Williams

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EDUCATION

Columbia University | New York, NY   **Aug. 2023 - Present**
B.S. in Computer Engineering
- **Relevant Coursework:** Advanced Programming in C, Operating Systems, Computer Architecture, Malware Analysis & Reverse Engineering, Databases, Data Structures in Java, Digital Systems, CS Theory, Discrete Math, Linear Algebra
- **Honors:** Dean's List 2025
- **CS/EE GPA:** 3.88

TECHNICAL SKILLS

Languages: C, Rust, Bash, Assembly (x86, MIPS), C++, VHDL, SQL, Java, Python (NP, Pandas, Pyplot, Scipy, Flask), TypeScript
Tools: Git, GitHub, Vim, Emacs, Visual Studio, PostgreSQL, IDA Pro, LTspice, AMD Vivado, LabVIEW, Jupyter, PowerShell
General: Agile software development, FPGAs, POSIX, Windows & Linux API, kernel-level dev, embedded, operating systems

SUMMARY

Third year computer engineering major at Columbia University with a deep fascination for all things computers: from computer graphics and simulation, to cybersecurity research, to OS development and embedded devices. Hands-on experience supporting undergraduate EE labs, developing a 3D narrative-driven video game, developing a full-stack web app, and more.

PROFESSIONAL HISTORY

Introduction to Electrical Engineering Course | New York, NY   **Jan. 2025 - Present**
Undergraduate Teaching Assistant
- Supervise the hands-on laboratory section for Columbia University's Intro to Electrical Engineering course.
- Assist undergraduate students in performing electrical experiments, troubleshooting equipment failures, and collecting and analyzing data using tools such as waveform generators and oscilloscopes.

Sunday Studios | New York, NY   **Apr. 2025 - Sep. 2025**
Programmer and Technical Artist
- Developed a fully functional and visually polished 3D video game with an independent startup game studio.
- Saved over 42 hours of compilation time and prevented bugs by implementing a CI/CD pipeline with custom GitHub Actions workflows for the Godot game engine, building for Windows, Linux, and MacOS.
- Maintained a rapidly growing codebase by designing and enforcing code quality standards for GDScript.
- Perfected in-game graphics and optimization using the latest Godot renderer features and best practices.

Outlier AI | Remote   **Apr. 2024 - Aug. 2024**
Code Specialist
- Improved LLM code generation by contributing clean, correct code and documentation to an AI training effort.
- Attended weekly meetings to connect with project management and learn how to write high-quality code.

PROJECTS

Minishell | Advanced Programming   **Spring 2025**
- Developed a sh-inspired shell in pure C with support for nested shells, output piping, and signals.

Book Tracking Application | Intro to Databases   **Fall 2025**
- Created a web application based on PostgreSQL and Python for user tracking of books and reading status.
- Includes social features such as ratings, global challenges, and optionally public or private book collections.

Personal Webpage   **Jan. 2026**
- Created a personal webpage and blog using Hugo and GitHub Actions for CI/CD hosting on GitHub Pages.

EXTRACURRICULAR EXPERIENCE

Columbia University Gaming Group | New York, NY   **Aug. 2023 - Present**

Competitive Team Director for the Counter-Strike 2 Esports Division
- Organize tryouts for newcomers, and practice and study sessions for established team members.
- Register subteams for collegiate, Ivy League, and national tournaments based on skill level.
- Review team and individual performance, and study strategies to provide coaching and make roster changes.

CU Cyber | New York, NY   **Sep. 2025 - Present**

Cybersecurity Club Member
- Participate in club lessons and CTF events, with a focus on binary exploitation and other cybersecurity education.