Maxwell Corwin

Completing a BS in **Computer Science** and Major in **Math**
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Education

University of South Carolina **Expected Graduation Date (2028)**

- **Relevant Coursework: Data Structures and Algorithms**, **Database Design**, **C and Operating Systems**, **Intro to AI**, **Linear Algebra**, **Ordinary Differential Equations**

Projects

Operating System (MaxOS) **C, Assembly**

- Developed a functional **x86 OS** from scratch, including a custom **bootloader** and **protected mode switching**
- Implemented low-level system functions for **disk I/O** and **memory management** using **Assembly**
- Utilized **NASM**, **GCC**, and **QEMU** to build and test the bootable operating system

C++ Black Hole Rendering **C++, Physics, Computer Graphics**

- Engineered a physics-based **raytracer** to simulate **gravitational lensing** using the **Schwarzschild metric**
- Created a custom **3D math library** for **vector operations**, **camera controls**, and **ray marching algorithms**
- Rendered scientifically-accurate **black hole visualizations** with an **accretion disk** colored by **temperature**

Experience

Roblox Game Developer **2017–2022**
Roblox Evolution Soccer

- Co-led development and operations for a soccer game, achieving over **12 million** lifetime visits
- Managed game updates and community engagement to maintain **4,000+** monthly active users

Old Football Legends

- Contributed to the core development of a popular, closed-community football game
- Implemented features that helped sustain a peak of **2,000** concurrent players

Web Development (Non-profit) **2023–2025**
StudentsHelpStudentsTutoring.com

- Designed and developed a responsive **website** using **HTML5**, **CSS3**, and **JavaScript** on the **WordPress** platform
- Grew the non-profit's reach by successfully onboarding over **60** tutees and **15** active tutors via the site

Research Intern **2023**
University of South Carolina

- Built **C++ firmware** for **UAV water sensors** integrating **pH**, **conductivity**, **temperature**, **turbidity**, and **GPS**
- Improved accuracy by debugging sensor failures, fixing **GPS** errors, and ensuring consistent data output

Technical Skills

Programming Languages: Python, **Java**, **Lua**, **C++**, **C**, **JavaScript**
Development Tools: Linux, **Git**, **VSCode**, **Roblox Studio**, **MySQL**, **Postman**, **Selenium**

Certificates

CLA: Programming Essentials in C — Codeacademy Python Advanced — Codeacademy C++ Advanced