Ryan Zmuda

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EDUCATION

University of Dayton, Dayton, OH
Bachelor of Science: Computer Science   **GPA***: 3.3   Expected Graduation: May 2026

SKILLS

- Programming Languages: Javascript | Python | Java | C | C# | Bash
- Frameworks: React | Svelte | Flask | SDL2 | Buildroot | Nuklear
- Software: Linux | Git | Vim | Docker | SQLite | Nginx | Systemd | Make

WORK EXPERIENCE

Riverside Research, Beavercreek, OH
Secure & Resilient Systems Intern   May 2023 – August 2023

- Designed and implemented a novel mechanism into the Linux kernel to support asynchronous system calls as part of a larger research project investigating an alternative operating system structure
- Participated in research and proposal efforts to draft a new internal operating systems research project

OhioHealth, Columbus, OH
Medical *Simulation Lab Assistant (Intern)*   April 2021 – May 2022

- Created and revised low-cost 3D printable models to assist in training physicians to be proficient in various surgical techniques

PROJECT EXPERIENCE

GitHub Contributions
- Created and published a python library with over 12,000 downloads to transform text into gcode for CNC machines
- Submitted merged pull requests to large 3D printer firmware repositories to fix errors

Computer Vision Projects
- Automated the popular video game "clash royale" by feeding enemy density and elixir data taken from pixels observed on the screen to an algorithm
- Wrote software to analyze math problems on paper and move a pen to write the correct answers within the bounds of the problems utilizing a CNC

Web Projects
- Created and deployed a social media website exclusively for high school students which garnered 7,700 visits across 814 users
- Designed a full-stack video streaming site to organize and archive short films for the Hilliard Davidson Media Arts Course
- Developed an online party game interfacing with Spotify's API where players guess who has streamed a presented song the most

Handheld Gaming Hardware/Software
- Designed and manufactured various portable handheld consoles from scratch consisting of personally designed PCBs, 3D printed enclosures and Customized Linux Images