

Ethan Grassia

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EDUCATION

Loyola University Chicago | May 2025

B.S. Computer Science, Cum Laude | GPA: 3.7/4.0

SKILLS

Programming Languages: C, C++, Python, Perl, Bash

Developer Tools: Git, SSH, Dnsmasq, nginx, iPXE, Docker, QEMU, cloud-init, Ansible

Security: GDB, Wireshark, CTF platforms (pwnable.kr, picoCTF), nmap, ufw, x86 assembly basics

EXPERIENCE

Software Engineer Intern | University of Southern California, ISI | Los Angeles, CA | June 2025 - July 2025

- Expanded the [SPHERE](#) cybersecurity research infrastructure by provisioning five new Linux images, enabling reproducible cyber-experiments by users (several Ubuntu releases, Arch, CentOS)
- Leveraged open-source tools such as cloud-init and Ansible to configure and deploy secure cloud instances for the research testbed
- Reconfigured the office LAN to enable faster development cycles with network booting and SSH
- Built the CI/CD pipeline for new images and tested on diverse hardware, including ARM, RISC-V, and x86, enabling first-time cross-platform support
- Gave a technical [presentation](#) to NSF board members sharing the team's rapid development progress and achievements

Research Intern | University of Missouri | Columbia, MO

May 2024 - September 2024

- Co-author on [PEARL](#), an IEEE Access paper focused on bridging large language model capabilities with hardware security to detect design-level trojans in integrated circuits
- Contributed to significant findings such as improved hardware trojan detection performance over state-of-the-art machine learning methods (up to 97% accuracy detecting trojans)
- Collaborated directly with PhD researchers, IEEE members, and graduate student mentors
- Fine-tuned GPT models on circuit specification datasets using AI-platform APIs

Tech Associate | Staples | Chicago, IL

August 2021 - May 2023

- Provided high-quality help desk support, managed work orders, and facilitated computer sales
- Diagnosed and serviced computer issues brought in by customers
- Performed data recovery services on damaged hard drives using Linux

PROJECTS

Cybersecurity Blog | <https://0reo.dev>

April 2026 - Present

- Publishing CTF writeups covering security-focused topics such as binary exploitation on a self-hosted web server.

Lightweight Shell | <https://github.com/x0reox/3sh>

December 2025

- Built a bash-like shell for Linux and macOS using C++, supporting essential low-level features such as pipes, IO redirection, built-in commands, command history, signal processing, and more. Includes documentation, use of syscalls, and the GNU readline library for command-line shortcuts.