

Christopher Cerne

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Education

Virginia Tech 2017 - 2021

B.S. Computer Science, 3.75 GPA

Graduated in May 2021. Vice President of the Cyber Security Club (2020 - 2021). Webmaster of the VPI Cave Club (2019 - Present). Brother of the Theta Tau professional fraternity.

Technical Skills

C, C++, Rust
x86, ARM, MIPS
Vulnerability Research

Python2.7, Python3
Git
Web Development

Java
Linux Kernel
Docker

Job Experience

Independent Security Work Jan 2019 - Present

Security Researcher

I independently identified and gained recognition for finding vulnerabilities in web applications and embedded devices. I wrote comprehensive bug reports and notified vendors with a 120-day disclosure policy. I am credited to finding [CVE-2020-8797](#), [CVE-2020-8798](#), [CVE-2020-12123](#), [CVE-2020-12124](#), [CVE-2020-12125](#), [CVE-2020-12126](#), and [CVE-2020-12127](#).

RedLattice May 2019 - Aug 2020

Vulnerability Research Intern

In the first summer, I researched and found security vulnerabilities in various commonplace embedded devices and developed tooling to exploit those vulnerabilities. In the second summer, I gained experience with JavaScript Core and V8 vulnerability research and worked with a team to find high-impact bugs.

Virginia Tech IT Security Office Sep 2019 - Dec 2020

Red Team Researcher

I evaluated the security of devices on the Virginia Tech Network. I developed tooling to facilitate embedded device research. I found numerous high-impact vulnerabilities, notified impacted departments, and worked with them to mitigate the issue.

CS @ Virginia Tech Aug 2020 - May 2021

Undergraduate TA for CS3214

I worked under the Virginia Tech Computer Science Department, fulfilling 10 hours a week as an undergraduate TA, and helped students in one of the most challenging courses in the CS curriculum, Computer Systems. I learned how to isolate bugs in student code and effectively teach systems-level concepts. I became an expert in debugging in GDB and programming in low-level C.

Focal Point Technologies

Jun 2017 - Aug 2018

IT Intern

In the first summer, I worked on a team to develop a mobile application from scratch. In the second summer, I led a team creating embedded systems to collect data.

Leadership, Awards, and Certifications

Junior Penetration Tester

Nov 2021

eLearnSecurity

I passed the well-known eJPT certification exam with a score of 95%.

Cyber Security Club @ VT

Sep 2020 - May 2021

Vice President

I organized events for the Cyber Security Club at Virginia Tech. I gave interesting technical presentations, including a presentation on attacking embedded devices. I helped the club fundraise by acquiring sponsorships.

Andor Assembly Competition

Aug 2019

Second Place

I singlehandedly represented Virginia Tech in the University of Nebraska's Andor Assembly Programming Competition. The competition focused on x86, ARM, and RISC assembly.

The Smartphone of the Future

Apr 2017

First Place

I won \$500 from the Institute of Electrical and Electronics Engineers (IEEE) for developing a prototype of a smartphone with interchangeable parts. I gained experience in embedded device programming and hardware interfaces such as I2C or SPI.

Publications

Security for College Freshmen

Aug 2017

United States Cybersecurity Magazine