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	Python2.7, Python3	Java
x86, ARM, MIPS	Git	Linux Kernel
Vulnerability Research	Web Development	Docker

Job Experience

Bishop Fox — Jan 2022 - Present

Security Consultant III

I am currently working as a security consultant at Bishop Fox. I help Fortune 500 companies secure their networks by performing penetration tests and security reviews of internal and external applications.

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. Engaged as a member of the prestigious Synack Red Team (SRT) and contributed to the Google Vulnerability Research Program (VRP), successfully identifying and responsibly disclosing high-risk vulnerabilities, resulting in substantial financial gains.

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 interchangable 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