

# Charles Zhao

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## WORK EXPERIENCE

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### Lawrence Livermore National Laboratory

May 2024 – Aug 2024

*Cybersecurity Intern*

*Livermore, CA*

- Improved development efficiency for lead developers by building unit and integration tests using Python (sqlite3, psycopg2, pytest), reducing debugging time and ensuring CI/CD compatibility.

May 2023 – Aug 2023

*Cybersecurity Intern*

*Livermore, CA*

- Built a dynamic web application for the Department of Homeland Security using the MEAN stack (MongoDB, Express, Angular, Node), delivering a scalable and efficient solution for enhanced data management.
- Developed a Python script to efficiently parse reports and identify suspicious IP addresses and domains interacting with a network, improving threat detection and network security monitoring.

### Coding STEM Academy

June 2016 – Aug 2018

*Teaching Assistant*

*Hacienda Heights, CA*

- Facilitated learning by guiding and empowering middle-school students to create their own games using Scratch and Java programming, fostering a hands-on, interactive educational experience.

## EDUCATION

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### Virginia Tech

*Blacksburg, VA*

*Master of Engineering in Computer Engineering*

May 2025

*Bachelor of Science in Computer Engineering, Major in Networking & Cybersecurity*

May 2024

- Magna Cum Laude; IC CAE Scholar; SFS CyberCorps Scholar

## PROJECTS

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### C++ Stager

Jan 2025 – May 2025

- Developed a custom C++ stager to deploy a Sliver implant onto Windows systems while evading Microsoft Defender, using obfuscation, process injection, and dynamic API resolution.

### Malicious File/URL Scanner

Jan 2024 – May 2024

- Designed and delivered a Python-based antivirus scanner for attachments and URLs, leveraging VirusTotal's API to effectively detect and mitigate malicious software embedded in emails.

### Microcontroller Programming

Jan 2022 - May 2022

- Programmed a word guessing game, a burger making game, and a simple Tamagotchi game, on the TI's MSP432P401R microcontroller, using C.

### Planned Drone Flight

Oct 2021 - Nov 2021

- Programmed a Tello drone to fly in a pre-determined pattern using C++.

## CERTIFICATIONS, SKILLS & INTERESTS

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- Certifications:** CompTIA Security+
- Skills:** Googling; Programming (Python, C++); Linux Terminal; Nmap; Git; Cycling with no hands
- Interests:** Investing; UFC; Being alive