

# Charles Zhao

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## WORK EXPERIENCE

<b>Lawrence Livermore National Laboratory</b> <i>Cybersecurity Intern</i>	<b>May 2024 – Aug 2024</b> <i>Livermore, CA</i>
<ul style="list-style-type: none"><li>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.</li></ul>	
<b>Coding STEM Academy</b> <i>Teaching Assistant</i>	<b>May 2023 – Aug 2023</b> <i>Livermore, CA</i>
<ul style="list-style-type: none"><li>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.</li><li>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.</li></ul>	
<b>Coding STEM Academy</b> <i>Teaching Assistant</i>	<b>June 2016 – Aug 2018</b> <i>Hacienda Heights, CA</i>
<ul style="list-style-type: none"><li>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.</li></ul>	

## EDUCATION

<b>Virginia Tech</b> <i>Master of Engineering in Computer Engineering</i>	<i>Blacksburg, VA</i> <b>May 2025</b>
<i>Bachelor of Science in Computer Engineering, Major in Networking &amp; Cybersecurity</i>	<b>May 2024</b>

## PROJECTS

<b>C++ Stager</b>	<b>Jan 2025 – May 2025</b>
<ul style="list-style-type: none"><li>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.</li></ul>	
<b>Malicious File/URL Scanner</b>	<b>Jan 2024 – May 2024</b>
<ul style="list-style-type: none"><li>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.</li></ul>	
<b>Microcontroller Programming</b>	<b>Jan 2022 - May 2022</b>
<ul style="list-style-type: none"><li>Programmed a word guessing game, a burger making game, and a simple Tamagotchi game, on the TI's MSP432P401R microcontroller, using C.</li></ul>	
<b>Planned Drone Flight</b>	<b>Oct 2021 - Nov 2021</b>
<ul style="list-style-type: none"><li>Programmed a Tello drone to fly in a pre-determined pattern using C++.</li></ul>	

## CERTIFICATIONS, SKILLS & INTERESTS

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