

# GABRIEL ADAMS

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## EDUCATION

<b>Tennessee Technological University</b> <i>Bachelors of Science in Computer Science, Cybersecurity</i>	Cookeville, TN Aug. 2022 – Dec. 2025
<b>Tennessee Technological University</b> <i>Masters of Science in Information Assurance and Cybersecurity</i>	Cookeville, TN Jan. 2026 – Dec. 2026

## ACCOLADES

<b>CyberCorps: Scholarship for Service   US of Personnel Management</b>	Cookeville, TN
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## CERTIFICATIONS

<b>SY0-701 - CompTIA Security+</b> <i>Valid Through: April. 13, 2028</i>	Issued: Nov. 1, 2024 (Renewed)
<b>CS0-003 - CompTIA CySA+</b> <i>Valid Through: Apr. 13, 2028</i>	Issued: April 13, 2025

## EXPERIENCE

<b>X163 Energy and Control Systems Security Intern</b> <i>Oak Ridge National Laboratory</i>	05/2025-08/2025 Oak Ridge, TN
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- Researched software vulnerabilities within embedded and IoT devices.
- Developed and ran custom fuzzing frameworks to uncover memory corruption and logic bugs, identifying issues within firmware.
- Reverse-engineered firmware using Ghidra to analyze communication protocols and root out authentication bypasses.
- Documented findings in detailed technical reports and presented remediation strategies to hardware engineering teams, leading to patch deployments.
- Presented all findings in front of colleagues and administration as part of my SULI internship requirements.

<b>Satellite Security Lead Researcher</b> <i>Cybersecurity, Education, Research and Outreach Center (CEROC)</i>	08/2024-Current Cookeville, TN
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- Built three separate test beds to study and research the security of communications between satellites and command stations.
- Developed software to analyze transmission data based on frequency bands, binary data patterns, and time signatures.
- Analyzed and mitigated threats to satellite ground stations, including unauthorized access, jamming, and signal spoofing attacks.
- Researched countermeasures for side-channel attacks on satellite cryptographic modules, including timing, power, and fault-injection vulnerabilities.

<b>IT Security Intern</b> <i>Rebo Lighting and Electronics</i>	05/2024-08/2024 Sparta, TN
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- Implemented and managed Windows administration technologies such as Active Directory, Exchange Server, Group Policy Objects, DNS, DHCP, IIS.
- Managed client network security through installation of firewalls and VPNs.
- Investigated potential breaches of information security policy and took corrective action when necessary.
- Implemented and managed a SIEM to analyze network traffic.
- Successfully passed an ISO 27001 audit after implementing over 26 new security policies, 4 security tools, and delivering security training to employees.

<b>Embedded Systems Security Analyst</b> <i>Center for Energy Systems Research</i>	05/2024-08/2024 Cookeville, TN
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- Wrote code in C, C++, as well as Structured Text to manage communication between SCADA devices.

- Developed 8 different models for secure renewable energy system grids.
- Built an image for a portable RTAC compatible with the SCADA HIL interface.
- Assisted in completing a multi-million-dollar project for the CESR lab research.

## AI Drone Security Researcher

07/2023-05/2024

*Cybersecurity, Education, Research and Outreach Center (CEROC)*

*Cookeville, TN*

- Utilized Wireshark to capture over 2TB of data to train an unsupervised AI security model.
- Successfully detected false-data injection, DOS, and MITM (man in the middle) attacks using the model.
- Worked as a team of 8 to successfully create the model, as well as simulate red team attacks on the model.

## Embedded Systems Engineer

01/2023-05/2024

*Center for Energy Systems Research*

*Cookeville, TN*

- Developed software for electrical energy transfer through wireless means.
- Incorporated the embedded C language to create a successful energy transferring circuit.
- Will be titled as an engineer in planned publication under the Tennessee Technological University research department.

## LEADERSHIP AND EXTRACURRICULARS

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### Defensive Cybersecurity Interest Group | 01/2024-Present

**Tennessee Tech**

- I am a current team lead, overseeing projects aimed at presenting cybersecurity concepts, managing a vSphere range, and preparing individuals for national cybersecurity competitions.

### CyberEagles | 08/2024-Present

**Tennessee Tech**

- I have the role of Site Director in CyberEagles where I present current news regarding cybersecurity, communicate with guest speakers, and work as a team to invoke interest for the department.

## TECHNICAL SKILLS

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**Languages:** C/C++, x86 Assembly, Python, Powershell, Bash

**IT Security:** Network Administration, Windows Administration, Windows Forensics, Microsoft Entra, Linux Administration, Linux Forensics, SIEM Management, Vulnerability Analysis

**Development:** Git, Docker, Google Cloud Platform, Amazon Web Service, Linode, VS Code, Visual Studio, PyCharm

## COMPETITIONS

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### Cybersecurity Collegiate Defensive Competition (CCDC) | 01/2025-05/2025

- I led my team as captain of my universities' first ever CCDC regional win, as well as our first time being one of 10 teams competing at nationals. My duties included managing the simulated corporate network, solving reverse engineering and other challenges, and completing business operational tasks.

### Cyber Resiliency and Measurement Challenge (CRAM) | 08/2024-10/2024

**Dahlgreen, Virginia**

- I built a team of 5 to compete in a NAVSEA hosted competition to utilize AI/ML and Data Science to score systems based on resilience. I worked as the lead of the team, as I had prior AI and leadership experience. I was in charge of assigning responsibilities, scheduling deadlines, and acted as the lead AI/ML developer. After the first phase of examination, our team was chosen as one of 25 teams to be invited to compete in Dahlgreen, Virginia the following October. This was the first time that Tennessee Tech has had a team submitted to a competition hosted by NAVSEA. The skills improved in this process were: leadership, AI/ML, distributed computing, Python development, Flask development, and creating high level documentation.

### National Cyber League (NCL) | 11/2023-11/2023

- Last fall I was part of a team that participated in the National Cyber League where we competed as a team for the first time together. Some skills I learned are: Open Source Intelligence, Cryptography, Log Analysis, Network Traffic Analysis, Scanning, Forensics, Password Cracking, recognizing Enumeration and Exploitation within logging, and Web Application Security.

## HOBBIES

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### IoT Pentesting | 01/2022-Present

- I frequently will take cheap hardware and analyze the firmware to confirm known CVE's as well as discover new ones. I have developed open source tooling to streamline this process as well.