Kai Mackall

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WORK EXPERIENCE & PROJECTS

Tennessee Technological University | Cookeville, TN | May 2021 - Aug 2021
Cybersecurity Research Intern
- Conducted cybersecurity risk analysis across 16 critical infrastructure sectors; documented mitigation strategies and compliance gaps
- Mapped multiple regulatory frameworks (NIST, FISMA, CMMC) to enterprise use cases, identifying overlaps and optimization points

Cybersecurity Homelab | May 2021 - Present
- Built and maintained multi-VM lab (Kali, Security Onion, REMnux) simulating enterprise environments
- Provided Tier 1-2 style support in a lab environment by diagnosing and resolving 25+ hardware/software/OS issues, performing regular updates, and documenting solutions for future use
- Used IDS/IPS tools (Snort, Suricata) to monitor and analyze traffic, applying config changes to improve performance

Software Engineering Project – VR Experience | Dec 2022 - May 2023
- Collaborated in a 5-person Agile team to design, code, and deploy a Unity-based VR application
- Led technical documentation, QA testing, and post-sprint bug resolution cycles
- Coordinated feedback integration with faculty and company stakeholders

EDUCATION

Western Governors University, Expected Jan 2026
M.S. in Cybersecurity and Information Assurance
GPA: Pass/Fail system (all courses passed)

Tennessee Technological University, May 2023
B.S. in Computer Science, Cybersecurity and Information Assurance Concentration
GPA (Inclusive Combined): 3.66/4.0 — Cum Laude

SKILLS

IT Support & Systems: Windows · macOS · Linux · Active Directory · Microsoft 365 · Azure · GCP
Networking & Security: TCP/IP · DNS · DHCP · pfSense · Firewalls · Snort IDS · IAM · RBAC/ABAC
Virtualization & Tools: VMware · VirtualBox · Zoom/Teams · Familiar with Ticketing Systems (ServiceNow/Jira)

CERTIFICATIONS AND PROFESSIONAL DEVELOPMENT

CompTIA Cybersecurity Analyst+ (CySA+) | Expires 2028
ISC2 Certified in Cybersecurity (CC) | Expires 2027
CompTIA Penetration Tester+ (PenTest+) | Expected Nov 2025

COMPETITION EXPERIENCE

National Cyber League Competition – Individual Games | Spring 2021 - Spring 2025
- Scored in the 95th percentile in final season by solving real-world IT challenges in system forensics, network traffic analysis, and password cracking
- Developed strong analytical, problem-solving, and documentation skills under timed conditions