

Avery Hughes

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EDUCATION

Bachelor of Science in Cybersecurity | Indiana Institute of Technology

May 2027

WORK EXPERIENCE

Cybersecurity Intern | DuCharme, McMillen & Associates, Inc. | Fort Wayne, IN April 2026 – Current

- ❑ Automate CrowdStrike Falcon agent deployment, firewall policy, and SOAR workflows via FalconPy and Ansible.
- ❑ Automate export of GitLab SAST, dependency, and container findings into Jira as tracked remediation tickets across 50 repos.
- ❑ Deploy k3s clusters for GitLab Workspaces developer environments, managing DNS, TLS, and Ansible provisioning.
- ❑ Develop Windows and Linux hardening baselines with automated compliance scanning and gap analysis.
- ❑ Architect an isolated malware analysis lab on Proxmox with CAPEv2, FLARE VM, and REMnux for sample detonation.

Security Analyst | Indiana Cyber Network | Fort Wayne, IN January 2026 – Current

- ❑ Conduct hands-on security assessments and adversary-focused analysis within regulated client environments.
- ❑ Identify, analyze, and validate security weaknesses through event investigation and attack-path analysis, escalating risks.
- ❑ Operate within Governance, Risk, and Compliance requirements while handling sensitive data and security testing.

Program Developer & Digital Literacy Educator | Ball Venture Grant | Fort Wayne, IN October 2025 – April 2026

- ❑ Developed and delivered hybrid training sessions for seniors on technology basics and cybersecurity awareness.
- ❑ Increased participants in digital confidence and engagement by teaching safe online practices and social connectivity tools.

IT Service Agent | Indiana Institute of Technology | Fort Wayne, IN September 2025 – January 2026

- ❑ Resolve 100+ IT tickets monthly, troubleshooting network, software, MFA, SSO, Microsoft Office, and hardware issues.
- ❑ Assist in deploying and maintaining campus-wide IT infrastructure for 1,500+ students and faculty.

Data Center Technician | Indiana Institute of Technology | Fort Wayne, IN August 2025 – July 2026

- ❑ Redesigned data center layout with Proxmox and ZFS/LVM-thin to improve efficiency, airflow, and system reliability.
- ❑ Integrated NetBox IPAM, Splunk monitoring, and LDAP to centralize visibility and strengthen infrastructure management.
- ❑ Standardized configurations and documentation to enhance maintainability and reduce operational overhead.

Undergrad Research Assistant | University of Notre Dame | Remote February 2025 – May 2026

- ❑ Build decentralized backend APIs using Python, FastAPI, Solidity, and IPFS to support Web3DB's distributed data architecture.
- ❑ Designed and implemented encryption, key-management, and access-control modules to enhance security and data integrity.
- ❑ First-author publication in *Springer CCIS* — "[Secure and Scalable Data Management Using Web3DB.](#)"

Indiana Tech Cyber Warriors | Indiana Institute of Technology | Fort Wayne, IN July 2024 – July 2026

- ❑ Lead Unix and team-wide training sessions for a 20+ member competitive cybersecurity team.
- ❑ Develop exercises, documentation, and reports focused on penetration testing, system hardening, and incident response.
- ❑ Coordinate competition strategy and execution, contributing to high team placements across cybersecurity events.

COMPETITIONS

- ❑ National Collegiate Cyber Defense Competition | 2x Indiana Qualifier | 2x Midwest Qualifier | 1x National Appearance
- ❑ Collegiate Penetration Testing Competition | 2x Appearance
- ❑ Department of Energy CyberForce Competition | 1x Appearance

PROJECTS

ClassCloud | ClassCloud.net

- ❑ Developed and deployed a VM provisioning and management platform across AWS and Proxmox, serving 100+ students.
- ❑ Built secure browser-based access with enterprise SSO and Microsoft OAuth, eliminating local setup or VPN dependency.
- ❑ Implemented scalable course-level automation, bulk provisioning, real-time monitoring, and hardened security controls.

Self-Hosted Infrastructure Lab

- ❑ Deployed a segmented multi-VLAN network with OPNsense and Unbound DNS filtering to isolate untrusted devices.
- ❑ Built centralized TLS with Cloudflare DNS-01 wildcard certificates and HAProxy, securing access to all internal services.

For a full list of projects, please visit my [website](#)

Skills, Leadership, Honors & Awards

- ❑ **Skills:** Python, Bash, GitLab CI/CD, Ansible, Terraform, Docker, Nginx, CrowdStrike Falcon, Arctic Wolf, Wazuh, Splunk, Jira.
- ❑ **Leadership:** Team Captain (Cyber Warriors), Unix Lead, Offensive Security Co-Lead, Technical Training & Documentation.
- ❑ **Honors:** CCIS Author, CCDC National Appearance, Ball Venture Grant Recipient, Indiana Tech Innovation Challenge Winner.