

Lucas Ferguson

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SUMMARY

Student with **4 years** of technical internships and hands-on offensive experience! Cyber competition team leader, winning **3rd Place Nationally** in NCAE, and performing web and network pentests using Burp Suite, ffuf, Nmap, sqlmap, and more. Fluent in Python, C++, and JavaScript, with experience automating vulnerability patching, hardening Linux systems, and securing industrial networks. Developed a [Home Lab](#) of **7 servers** across 3 locations running **50+ services** for penetration testing and DevOps experimentation.

Explore my projects at lucasferguson.net — built with Next.js, TinaCMS, and hosted on Vercel.

EDUCATION

Illinois Institute of Technology, Chicago, IL
Accelerated **MAS** and **BS** in **Computer Science**

May 2026
Dean's List | **GPA: 3.62**

SKILLS

Web: Node.js, TypeScript, Next.js, React, P5.js, Three.js, GraphQL, WebSockets

DevOps: Proxmox, PostgreSQL, Docker, Git, and cloud platforms (AWS, GCP), centralized logging (ELK Stack), Apache Spark

Languages: Python, C/C++, Java, Bash, PowerShell, Dart (Flutter), Go

Belden: HIOS, Hirschmann HiVision Network Management, **Belden Horizon Data Ops** (NodeRED, Grafana, Time series DB)

WORK EXPERIENCE

Fullstack Software Engineering Intern, [Belden](#), Chicago, IL

May 2025 – Present

- Building a product and customer database with **Next.js / Node.js / PostgreSQL and Docker** to enable Sales, Consulting, and Engineering teams to quickly track product end-of-life dates.
- Achieved CT1, CT2, CP1, and CP2 certifications in Belden's **Industrial HiVision** and **HIOS** software; configured and deployed managed network switches for secure, reliable industrial automation environments.
- Designed a **Tool Lifecycle** process for SAAS apps; streamlining security evaluation, acquisition, and onboarding.

Software Automation Intern, Tech Support Minnesota, *Greater Minneapolis, MN*

May 2022 – August 2024

- Developed **Python** scripts to patch vulnerabilities, enable MFA, and collect security alerts across **1,000+ endpoints**.
- Deployed **Azure** applications to analyze M365 tenant compliance leveraging [CISA's ScubaGear](#) and CIS Benchmarks.
- Transformed audit findings into actionable steps; **collaborating across teams** to implement cybersecurity remediations.

Resident Advisor, Illinois Institute of Technology, *Chicago, IL*

August 2023 – Present

- Overseeing 80 residents; promoting social engagement, mental health, and academic excellence.

Web Developer, Kubes Furniture & Flooring, *Greater Minneapolis, MN*

February 2019 – Present

LEADERSHIP & PROJECTS

President, CyberHawks, *Illinois Tech*

January 2023 – Present

- Led a 60+ student cybersecurity team; organized training, runbooks, and infrastructure for offensive and defensive operations. Competitions & highlights:
- [NCAE](#) – **3rd Nationally, 1st in Midwest** – Only team to complete all national CTFs. Located and removed vulnerabilities (ACL misconfigurations, malicious cron jobs, modified system executables). Created firewall configurations for Ubuntu, Debian, and CentOS using iptables.
- [DOE CyberForce](#) – **12th Nationally** – Secured a simulated power plant while under live attack.
- [CCDC](#) – **3rd in Midwest** – Developed PowerShell scripts and used Sysinternals to harden Windows Server 2016/2019. Performed active defense to eject red-team attackers, edited Active Directory, and configured host and Palo Alto firewalls. Configured and maintained DNS, LDAP, and Active Directory services with ~95% uptime.
- [CPTC](#) – **3rd in Midwest** – Performed web penetration testing with Burp Suite, ffuf, and the Social-Engineer Toolkit (SET). Executed privilege escalation with LinPEAS/WinPEAS. Conducted Active Directory attacks and enumeration (kerberoasting, LLMNR/mDNS poisoning, BloodHound). Produced 60+ page vulnerability reports using SysReptor.

Software Engineer, IBM, *Illinois Tech Research Project*

November 2022 – Present

- Technology: Swift, Python, Java
- Collaborating with IBM to build control software for a Global Network of telescopes.
- Developing algorithms based on astrophysics research to increase the signal quality of long exposure images.

Treasurer, Illinois Tech Robotics, *Illinois Tech*

November 2022 – Present

- **Belden Jukebox Team Project:** Universal Robots (UR5) 6-axis Arm, 1,200 LEDs, Custom PCBs.
- Technology: MQTT, IO-Link, Hirschmann OpEdge, and more.