Jack Frambes

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EDUCATION

University of Delaware, Newark, DE
Master of Engineering in Cybersecurity (Attending for Fall 2025)
Expected Graduation: December 2026
Coursework: Introduction to Data Mining, System Hardening & Protection

Xavier University, Cincinnati, OH
Bachelor of Science in Computer Science, Concentration in Cybersecurity
Minor: Information Systems | GPA: 3.205 / 4.00 | Graduation: May 2025
Coursework:

- Data Visualization,
- Penetration Testing,
- Data Modeling & Management,
- Database Management, Networking,
- Scripting for System Admin,
- Machine Org & Assembly,
- Operating Systems,
- Cyber Defense,
- Software Engineering I,II,
- Rust Programming Language,
- Languages & Automata

TECHNICAL SKILLS

- Programming Languages: Python, Java, Rust, C/C++, Bash, Powershell, SQL
- Security Tools: Wireshark, Kali Linux, Metasploit, Burp Suite
- Firewalls: Fortinet, Palo Alto
- Intrusion Detection: Snort, Suricata, Splunk
- Databases: MySQL, PostgreSQL, SQLite, Redis, Rocksdb
- Other: Docker, AWS, Git, Virtualization Software, Tableau

EXPERIENCE

Windstream, Remote — Network Security Intern
May 2023 – Aug 2023 | Hours per Week: 40
Supervisor: Frank Agri, Frank.agri@windstream.com

- Developed a custom Python application to streamline ticket reporting, improving team productivity.
- Configured firewall rules and policies to uphold robust security standards across the internal network.
- Monitored external cybersecurity threats, analyzing network traffic and responding to alerts.
- Investigated and resolved security incidents, ensuring protection of sensitive data.

Lakeside Chautauqua, Lakeside, OH — Programming Registrar
May 2024 – Aug 2024 | Hours per Week: 40
Supervisor: Katalin Domotorffy, khajdu@hotmail.com

- Created a Rust program that saved ~4 hours per week by automating registration workflows.
- Implemented registration policies and timelines to support smooth administration processes.
- Maintained accurate digital records and improved data integrity.

PROJECTS

- **Senior Capstone Project — "Penetration Test"**
  - Conducted a full-scope penetration test on a live production network for a regional industrial firm, following the Penetration Testing Execution Standard (PTES).
  - Performed external reconnaissance using OSINT sources to enumerate employee information, outdated infrastructure data, and potential phishing targets.
  - Launched a phishing simulation using a custom-purchased domain; Achieved a 46% open rate and 5% click-through rate, revealing organizational susceptibility to phishing that could compromise user credentials.
  - Executed internal vulnerability scanning and enumeration of network devices, identifying and exploiting critical vulnerabilities such as default credentials on printers, intercom systems, and management consoles.
  - Exploited internal systems to gain access to sensitive data, including user credentials and unprotected customer transaction records.
  - Recommended mitigations including least privilege enforcement, phishing awareness training, plugin updates, and internal service hardening.
  - Delivered a professional technical report and executive summary to company leaders, outlining critical (2), high (2), and medium (1) severity vulnerabilities.
- **College Sports Zone**
  Full-Stack IOS & Android Application | In Testing on TestFlight
  - Built a full-stack sports data aggregation platform for NCAA men's hockey, featuring real-time game tracking, team statistics, and player metrics.
  - Developed asynchronous Rust-based API integrations to query and update live game data from third-party sources on a 10-second interval.

- Designed and optimized a MySQL schema to store games, players, penalties, scores, and standings, minimizing storage via conflict-aware inserts.
- Integrated multi-threaded data processing and change detection to trigger database writes only on meaningful game events (e.g., goals, penalties).
- Implemented rate-limiting, environment config loading, and request queuing for game-day updates across 15+ concurrent games.
- Architected a Flutter mobile app for data display and user interaction

- **Cyber Defense Network Project**
  Custom Network built in Cyber Defense Class
  - Built a network protected by Palo Alto Firewall
  - Created Internal and DMZ subnets to separate external facing applications from sensitive applications
  - Created firewall rules to properly protect network preventing external applications from accessing the internal network while allowing access to the DMZ web server.
  - Set up Windows Server 2019 implementing DHCP, CA and an internal web server

LEADERSHIP & EXTRACURRICULAR

Cybersecurity Club, Xavier University — President

- Organized weekly workshops teaching underclassmen real world Cybersecurity skills
- Leads teams on competitions

Club Ice Hockey — President

- Managed an $80,000 budget
- Maintained league and school eligibility
- Ordered ice, scheduled refs, games and practices and any other administration work required by the team

HONORS & CERTIFICATIONS

- GIAC GFACT (Issued 2024)
- Dean's List (3 semesters)
- US Cyber Team Pipeline Participant
- Nomination to the Naval Academy