Chloe Cassandra Kilroy

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U.S. Citizenship: Yes.
Special Hiring Authority: Yes, SFS Public Law hiring authority. SFS scholars can be hired under Public Law 113-274 Section 302.
Clearance: No, I have no financial, criminal, or ethical issues that would preclude me from obtaining a Top-Secret Clearance.
Federal Experience: No, I have state government experience for the State of Illinois.

EDUCATION

Loyola University Chicago, Chicago, IL
NSF CyberCorps Scholarship for Service, 2024-2026
Research Impacting the Loyola Community, Graduate School Interdisciplinary Symposium, 2025
Dean's List (6 times), 2022-2025

PROFESSIONAL EXPERIENCE

Loyola University Chicago **January 2025 - Present**
Research Assistant (Hybrid)

- Complete data collection, cleaning, and integration tasks using Python and SQL
- Perform descriptive data analysis tasks in Python to identify trends and patterns in user interactions that reveal the dynamics of cyberbullying
- Present findings to cultivate engagement for the BullyBlocker project at research symposia
- Develop and evaluate ML models to leverage network-related patterns in the detection of cyberbullying incidents, improving the accuracy of role classification

Illinois Department of Insurance (IDOI) **May 2025 - August 2025**
DOI CyberCorps Intern (Hybrid)

- Crafted 5 toolkits for IDOI and its licensee regarding cybersecurity best practices
- Assisted IDOI in determining what insurance company minimum cybersecurity as they relate to the Illinois Insurance Data Security Law and industry standards
- Produced training materials and interactive sessions to improve staff cybersecurity awareness
- Defined a technical framework for categorizing insurers by cyber risks
- Organized a chain of custody document of IDOI's response to an insurer data breach notification
- Created 3 forms for IDOI to log insurers' compliance in the Illinois Insurance Data Security Law

Great Wolf Lodge Corporate **May 2024 - August 2024**
Cybersecurity Intern (Hybrid)

- Proactively identified and mitigated vulnerabilities using SIEM
- Led and implemented 7 company-wide phishing simulations
- Authored and distributed a phishing response training guide to reduce click rates by 23.91%
- Utilized EDR solutions to conduct password management audits, remediating 25 at-risk storage mechanisms, and informed users of secure password storage
- Conducted in-depth research on data breaches affecting employees
- Utilized firewall management tools to configure and test new rules
- Investigated security events via EDR and SIEM

COMPETITIONS

- Competed in 13 cybersecurity competitions, including:
    - **National Cyber League (NCL) Spring Team:** placed 72nd out of 457
    - **DOE Cyberforce Competition:** placed 14th out of 94 university teams
    - **National Cyber League (NCL) Fall Individual Game:** placed 837th out of 8,513

- **Naval Surface Warfare Center Dahlgren Division CRAM Challenge**: Our model was selected among the top 25 teams to progress to Phase II
- **DoD Cyber Sentential Skills Challenge:** placed 294th out of 1,500

PROJECTS

Infrastructure Security Redesign (2025)

- Conducted a post-incident infrastructure assessment for a technology company, identifying risks across outdated NAS, SQL clusters, FTP servers, web servers, and client systems
- Proposed a new secure architecture including TrueNAS, SQL Server 2022 HA clusters, load-balanced web servers, SFTP/cloud delivery, and EDR-protected client systems

Wireless Bridge Design (2025)

- Designed and documented a 6.75-mile point-to-point wireless link using Ubiquiti LTU radios, achieving >200 Mbps throughput with redundancy and surge protection
- Performed link-budget and Fresnel zone clearance calculations, specifying tower height, grounding, and weatherproofing for reliable enterprise connectivity

Root Shell Exploitation (2024)

- Completed a penetration testing project on a simulated Linux environment, using Nmap, Hydra, and John the Ripper to enumerate services, crack credentials, and gain system access
- Identified and exploited a buffer overflow vulnerability in a C program with GDB to escalate privileges and obtain a root shell

Investigation and Digital Forensic Report (2024)

- Conducted a thorough forensic investigation using tools such as EnCase, Any.Run Sandbox, and VirusTotal to analyze malware and build a comprehensive timeline of events
- Uncovered 3 key findings, identifying system compromises and data breaches

RESEARCH PRESENTATIONS

1. **C. Kilroy**, T. Rosario, M. Sandoval, S. Sikdar, Y. N. Silva. Cyberbullying Networks: Analyzing Victim, Aggressor, and Defender Interactions on Instagram.The Greater Chicago Area Systems Research Workshop (GCASR), Loyola University Chicago, Illinois, 2025.
2. E. Chan-Tin, D. Gaevskiy, J. Honig, **C. Kilroy**, L. Lim, J. Stephens. How do Malicious Actors Use Techniques to Avoid Detection and Identification? U.S. Cyber Command Cyber RECon 25.
3. **C. Kilroy**, T. Rosario, M. Sandoval, S. Sikdar, Y. N. Silva. Cyberbullying Networks: Analyzing Victim, Aggressor, and Defender Interactions on Instagram. The Graduate School's 18th Annual Interdisciplinary Symposium, Loyola University Chicago, Illinois, 2025. Award for Impacting the Loyola Community.
4. M. Abuhamad, E. Chan-Tin, D. Gaevskiy, **C. Kilroy**, L. Lim, Y. Silva, L. Stalans. NSF CyberRambler Scholarship for Service Program. Loyola Undergraduate Research and Engagement Symposium, Loyola University Chicago, Illinois, 2025.

VOLUNTEER & COMMUNITY EXPERIENCE

7968 Cybersecurity Competition Club **August 2024 - Present**

Executive Board Social Media Manager (May 2025 - Present)

- Manage the Organization's social media presence and assist team members in producing physical media to advertise events and competitions
- Work with team members to determine posts and communications necessary, encouraging participation in events

Women in Cybersecurity WiCyS **September 2023 - Present**

Member

- Network with global cybersecurity professionals and students, building strong connections and exchanging insights on the latest industry trends and practices
- Actively participate in exclusive events, webinars, and workshops, hosted in collaboration with leading companies and industry experts, gaining exposure to cybersecurity developments