Kaitlyn DeValk-Hammond

Cybersecurity and information security professional with 10 years of progressive experience operating within public domains to include the Department of Defense and Department of Homeland Security. Experienced in vulnerability and penetration test assessments, Red Team operations, Security Operations Center (SOC), Threat Hunting, Incident Response, Visualization, Cybersecurity Education, and Classroom Teaching.

[https://kaitlyndevalk.com] . [https://github.com/artemis19] . [kaitlyn.s.devalk-hammond@uscga.edu]

Core Competencies

Technical: Python, Golang, Javascript, HTML/CSS, Bootstrap, Flask, Django, Tableau, Jupyter Notebooks, GIS Data Processing & Analysis, Cybersecurity Visualization, Penetration Testing, Forensics, and Incident Response

Professional: Cybersecurity Documentation, Engineering Technical Writing, Risk Management & Assessment Report Writing, and Human-Centered Research Methods

Education

M.S. in Computer Science, University of Maryland (UMD) (2021-2022), GPA: 3.91

- Advised by Dr. Niklas Elmqvist.
- Thesis research focused on designing human-centered and usable cybersecurity visualizations.
- Coursework focused in security, information visualization, and data science.

B.S. in Electrical Engineering, US Coast Guard Academy (USCGA) (2015-2019), GPA: 3.84

- Graduated with High Honors.
- Focused in Computer Systems.

Experience

Instructor, U.S. Coast Guard Academy (2025 - Present)

- Teach in the Electrical Engineering and Computing Department.

- Courses taught are centered in the Cyber Systems and Electrical Engineering undergraduate majors in the areas of computer programming, computer security, and networking.

2003 Cyber Protection Team, Executive Officer, Coast Guard Cyber Command (2023 - 2025)

- Second in command of 39-person team charged with threat hunting, incident response, and penetration testing assessments on the Maritime Transportation System (MTS).
- Plank owner for unit and project officer for official unit establishment and command designation.
- Planned and executed over 20 missions to enhance the resiliency of MTS Critical Infrastructure against cyber disruption.

Graduate Research Assistant, University of Maryland (2021 - 2022)

- Worked under Dr. Niklas Elmqvist with UMD Applied Research Laboratory for Intelligence and Security (ARLIS) on visualizing supply chain logistics with geospatial data.

Operational Assessments Team Lead, Coast Guard Cyber Command (2019-2021)

- Ran 24/7 watch floor for the Coast Guard Enterprise Mission Platform, handling incident response and coordination for 45,000 endpoints.
- Coast Guard Assessments Lead for vulnerability and penetration test assessments for Coast Guard systems.
- Developed penetration testing training and mock assessments for Vulnerability Assessment team members.
- Assessed risk for mission essential systems, developed risk assessment report, and provided appropriate recommendations.

Department of Defense Internship (2018)

- Automated network infrastructure using variety of programming languages & software.

Officer Candidate, U.S. Coast Guard Academy (2015 - 2019)

- Cybersecurity Team Captain: Led the team to first-place in multiple competitions. Personally developed training material, and briefed multiple flag-level officers and VIPs: Coast Guard Commandant, Members of

Congress, and the Department of Homeland Security Under Secretary for Science and Technology.
- Opened the first Cyber Lab at the U.S. Coast Guard Academy for the establishment of the Cyber Systems major with the USCGA Superintendent and Coast Guard Commandant present.

Teaching and Advising Experience

U.S. Coast Guard Academy

Course Coordinator and Developer

- EEC 226: Computer Communications and Networking (Spring 2026)
- CYS 498: Intro to Cyber Threats (Elective, Spring 2026)

Instructor

- EEC 220: Transition to Object-Oriented Programming (Fall 2025)
- CYS 330: Computer and Network Security (Lab, Fall 2025)

Advisor

- Senior capstone project advisor for group of 4 Cyber Systems majors. Research is focused in maritime security and incident response and explored using machine learning methods to perform anomaly detection on maritime networks. (2025-2026)
- Academic advisor for 13 students across the Electrical Engineering and Cyber Systems major.

Conference Talks

- Presented “Riverside: A Network Security Visualization Tool” at ShmooCon, January 2023. Available at the following link: https://www.youtube.com/watch?v=5NwQdIyn3uU.
- Presented “Riverside: Dynamic Visualization of Network Traffic for Situation Awareness in Computer Security” poster at 19th IEEE Symposium on Visualization for Cyber Security, October 2022.
- Presented “Riverside: A Network Security Visualization Tool” at Wild West Hackin’ Fest Toolshed, October 2022. Available at the following link: https://www.youtube.com/watch?v=2qcqN6KVdhI.
- Presented “Industry Perspectives on Offensive Security Tooling” at 18th Symposium on Usable Privacy and Security, 8th Workshop on Security Information Workers, August 2022.

Publications

- DeValk, K., & Elmqvist, N. (2023). Riverside: A design study on visualization for situation awareness in cybersecurity. Information Visualization, 23(1), 40–66. https://doi.org/10.1177/14738716231189220
- DeValk, K. (2022). Real-Time Cybersecurity Situation Awareness through a User-Centered Network Security Visualization (Publication No. 29999995) [Master's thesis, University of Maryland, College Park]. ProQuest Dissertations & Theses Global.

Projects and Research

Riverside (2021-2023) - Designed and developed a complete network security visualization system as part of my master's thesis research. Source code is available at https://github.com/artemis19/riverside. (Golang, Javascript, HTML, CSS)

Personal Website Development and Blog (2019-Present) - Developed personal website with blog on technical and personal topics in the Information Security community. (Flask, Jinja, Nginx, uWSGI, HTML, CSS, Javascript, Bootstrap)

Augmented Reality for Coast Guard Mission Support (2018-2019) - Augmented US Coast Guard Maintenance Procedure Cards to train new personnel and reduce errors during the maintenance process using the Microsoft HoloLens technology. (C#, Microsoft HoloLens Mixed Reality, Unity, Visual Studio)

Certifications

- GIAC Cyber Threat Intelligence (GCTI) Certification, October 2024
- Offensive Security Certified Professional (OSCP) Certification, January 2024
- GIAC Penetration Tester (GPEN) Certification, February 2021
- GIAC Certified Incident Handler (GCIH) Certification, November 2020
- Certified Information Systems Security Professional (CISSP) Certification, July 2020

Training

- SANS FOR578: Cyber Threat Intelligence, Online, 2024
- SANS FOR508: Advanced Incident Response, Threat Hunting, and Digital Forensics, Online, 2023
- SANS SEC560: Enterprise Penetration Testing, Online, 2020

- SANS SEC504: Hacker Tools, Techniques, and Incident Handling, Online, 2020
- The Linux Foundation: Essentials of Linux System Administration, Online, 2020
- SANS SEC573: Automating Security with Python, February 2019
- SANS SEC542: Web App Penetration Testing and Ethical Hacking, October 2016

Significant Achievements

- 2025 Copernicus Award Winner from AFCEA International
- BSides Connecticut CTF ‘25, 1st Place Team
- DEFCON Red Team Village CTF ‘22, 2nd Place Team
- DEFCON Red Team Village CTF ‘21, 6th in Qualifiers, 9th in Finals out of 10 Teams
- CISA President’s Cup CTF Team ‘20-24, Placed in top 15% and advanced to Round 2
- SANS NetWars Military Services Cup ‘19-20, 3rd Place, competed for U.S.C.G. Cyber Command
- Cyber 9/12 Strategy Challenge in Geneva, Switzerland ‘19, Best Oral Presentation, Semi-Finalist