

NATHANIEL LAVOY

SUMMARY

Proactive Computer Science Master's student with a 4.0 GPA and experience in software engineering, AI policy research, and cybersecurity. Proven ability to build scalable applications, assess emerging technologies, and deliver actionable insights to senior stakeholders.

TECHNICAL SKILLS

Programming Languages: Python, C++, SQL, Javascript, HTML, CSS

Tools/Platforms: Git/GitHub, VSCode, Docker, VirtualBox, CI/CD (GitHub Actions), Unix/Linux

EDUCATION

New York University, New York, NY

Master of Science, Computer Science; GPA: 4.0

Jan 2023 - May 2025 (Expected)

- Advanced Coursework: Machine Learning, Software Supply Chain Security, Software Engineering, Databases
- 2024/25 NYU Tandon Graduate School of Engineering Dean's Distinguished Fellow (Full Academic Scholarship)

Tandon Bridge Program, Certificate of Distinction

Jul 2023 - Dec 2023

University of California, Santa Barbara, CA

Bachelor of Science, Biopsychology; GPA: 3.92

Oct 2017 - Jun 2021

- High Honors, UCSB Dean's list

PROFESSIONAL EXPERIENCE

New York University, New York, NY

Teaching Assistant, Network Security

Sep 2024 - Present

- Build course infrastructure with Docker Compose and provide technical support for 100+ graduate students

RAND, Washington D.C.

Adjunct Staff

Sep 2024 - Present

- Assess the geopolitical impact of emerging technologies, concentrating on challenges posed by bulk data collection

Summer Associate

May 2024 - Sep 2024

- Elicited malware engineering and software vulnerability exploitation capabilities from 1.5T+ parameter LLMs
- Researched and evaluated the implications of AI on national security, with a focus on mitigating threats from rapid development of generative models in high-risk regions
- Provided actionable policy recommendations to senior government officials

Calm, Remote

Software Engineering Contractor

Mar 2022 - Jun 2022

- Designed and implemented an audio feature for the Calm mobile and web apps, now enjoyed by 4M+ users
- Led a team of composers and engineers to ensure timely delivery, product goal alignment and seamless integration

Brain.fm, Remote

Digital Signal Processing Intern

Aug 2020 - Dec 2021

- Built digital signal processing tools to analyze acoustic properties of 1k+ Brain.fm sound files
- Created mockups of product implementations for the UX team to improve engagement of 150k+ users

PROJECTS

- Built and deployed a transparency log auditor for code signing platform Sigstore, implementing a CI/CD pipeline with static and dynamic analysis, secret protection, and automatic SBOM generation/attestation upon release
- Engineered an app to encrypt personally identifiable information with post-quantum safe PKI algorithms
- Created a responsive portfolio website with raw Javascript, CSS and HTML (nate-lavoy.github.io)

PUBLICATIONS

- "Addressing the National Security Risks of Bulk Data in the Age of AI." *RAND*, 23 Aug. 2024
- "TikTok Is a Threat to National Security, but Not for the Reason You Think." *RAND*, 14 Aug. 2024

EXTRACURRICULARS

- Teach cybersecurity through the NYU OSIRIS Lab and playtest challenges for the CSAW CTF competition
- Songwriter and multi-instrumentalist (guitar, piano, banjo, ukulele, vocals) with 60k+ streams across platforms