

# 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

*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](https://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