Madelyne Z. Xiao

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EDUCATION

Princeton University, Princeton, NJ — Ph.D., expected May 2026
Center for Information Technology Policy
Department of Computer Science

Stanford University, Stanford, CA — B.S., B.A., April 2018
Bachelor of Science, Mathematics
Bachelor of Arts, Comparative Literature

WORK & RESEARCH EXPERIENCE

CyLab, Carnegie Mellon University — June 2025 - present
Visiting Researcher — Pittsburgh, PA

- Advised by Sarah Scheffler, Assistant Professor in Carnegie Mellon University's Department of Engineering and Public Policy.
- Current research projects include a security and privacy analysis of age verification applications.

Center for Information Technology Policy — August 2021 - present
Ph.D. candidate — Princeton, NJ

- Advised by Jonathan Mayer, Associate Professor in Princeton's Department of Computer Science and School of Public and International Affairs.
- Recent research projects broadly address crowd-driven content moderation via Twitter's Community Notes program, detection of misinformation and influence operations, and information security of journalistic investigations.

The New Yorker — July 2019 - Aug. 2021
Editorial Staff — New York City, NY

- As a fact-checker, liaised with editors and writers to ensure the accuracy of articles for print and web; conducted research and edited drafts for factual rigor. Collaborating authors include Dexter Filkins, Margaret Talbot, Kathryn Schulz, and Peter Hessler.
- Previously, as an editorial producer, coordinated the digitization of print articles; designed and implemented workflow improvements in JavaScript and Python.

Stanford Journalism Department — May 2016 - May. 2017
Research Assistant — Stanford, CA

- Worked with journalists from the Seattle Times and Peninsula Press to design and execute a large-scale data story on discriminatory police traffic stop practices.
- These datasets and analysis pipelines formed the basis for the Stanford Open Policing Project.

PUBLICATIONS

Madelyne Xiao, Jonathan Mayer. *SoK: Machine Learning for Misinformation Detection.* USENIX Security 2025.

Madelyne Xiao, Andrew Sellars, Sarah Scheffler. *When Anti-Fraud Laws Become a Barrier to Computer Security Research.* ACM CS+Law 2025.

Madelyne Xiao, Palak Jain, Micha Gorelick, Sarah Scheffler. *Synopsis: Secure and Private Trend Inference from Encrypted Semantic Embeddings.* In submission 2024.

Madelyne Xiao, Mona Wang, Anunay Kulshrestha, Jonathan Mayer. *Account Verification on Social Media: User Perceptions and Paid Enrollment.* USENIX Security 2023.

INVITED TALKS & GUEST LECTURES

Notes on Notes: An Audit of Twitter/X's Community Notes. Poster at the New Directions in Social Algorithms Workshop at Yale University, October 2025.

Secret Vector Search: Secure and Private Content Querying with Semantic Embeddings. Invited talk at the Re-Imagining Cryptography and Privacy (ReCAP) Workshop at Tufts University, May 2024.

Systematizing machine-learning approaches to automated misinformation detection. Invited plenary talk at the Yale Information Society's Propaganda and Emerging Technologies Conference at Yale Law School, April 2024.

Privacy-preserving analytics on encrypted message embeddings. Invited talk at Aileen Nielsen's Privacy Law class at Harvard Law School, November 2023.

Community Notes, bridging systems, and algorithmic diplomacy. Guest lecture for Arvind Narayanan's Ethics of Computing class, October 2023.

User Perception of Account Verification on Social Media. Invited talk at the 7th Workshop on Technology and Consumer Protection (IEEE ConPro '23), San Francisco, CA. May 2023.

FUNDING

National Science Foundation Graduate Research Fellowship (3 years of graduate study).

Gordon Wu Fellowship (first-year fellowship in the School of Engineering at Princeton).

IEEE Symposium on Foundations of Computer Science (FOCS) 2019 travel grant. Nov. 9-12, 2019. Baltimore, MD.

Programming Languages Mentoring Workshop, ACM SIGPLAN International Conference on Functional Programming. Aug. 16-22, 2019. Berlin, Germany.

Helen Gurley Brown Fellowship, American Museum of Natural History. Sept. 2018 - Aug. 2019. New York, NY (1 year residency).

SERVICE

USENIX Security Program Committee, 2026
ACM Conference on Fairness, Accountability, and Transparency (FAccT) Program Committee, 2025
Reimagining Cryptography and Privacy (ReCAP) Program Committee, 2025
USENIX Security External Reviewer, 2025
Eurocrypt External Reviewer, 2023
Princeton Computer Science Graduate Council, 2022-2023
Princeton Computer Science Pre-Admissions Mentorship Program, 2022-2023
FAccT External Reviewer, 2022