

Katherine Wu

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Education

Cornell University

Ph.D. in Computer Science
Advisor: Alexandra Silva

2024 – 2029 (anticipated)

GPA: 4.0/4.0

Stony Brook University

B.S. in Computer Science (Honors), B.S. in Mathematics
Summa Cum Laude

2020 – 2024

GPA: 3.88/4.0

Research Experience

Cornell University

Ph.D. Student

Scalable continuous probabilistic programming languages for Bayesian inference

Aug. 2024 –

Argonne National Laboratory

Research Intern

Forward- and reverse-mode automatic differentiation for probabilistic programs

May 2026 – Aug. 2026

Stony Brook University

Undergraduate Research Assistant

Developed a Prolog-based question answering system that parses natural language questions and retrieves answers from a knowledge base

Jan. 2024 – Aug. 2024

Università della Svizzera italiana

Research Intern

Proved non-interference for a novel type system enforcing end-to-end confidentiality in distributed data analytics

May 2024 – Aug. 2024

File Systems and Storage Lab, Stony Brook University

Undergraduate Research Assistant

Collaborated with IBM researchers to develop a file system that accelerates intermediate data transfers between functions in serverless applications

Jan. 2023 – Jan. 2024

Stony Brook University

Undergraduate Research Assistant

Developed noise-tolerant string extension learning algorithms for language identification in the limit and established theoretical guarantees

Jan. 2022 – Aug. 2023

Publications

1. Katherine Wu, Jules Jacobs, Kevin Batz, Alexandra Silva. **Type-Directed Discretization of Probabilistic Programs**. In *Proceedings of the ACM on Programming Languages (PACMPL)*, 10(OOPSLA2), 2026. [paper]
2. Katherine Wu and Yanhong A. Liu. **LP-LM: No Hallucinations in Question Answering with Logic Programming**. In *Proceedings of the 40th International Conference on Logic Programming (ICLP 2024)*. [paper]
3. Alex Merenstein, Xinran Wang, Vasily Tarasov, Prajjawal Agarwal, Scott Guthridge, Kapil Thakkar, Katherine Wu, Ali Anwar, Erez Zadok. **Balancing Costs and Durability for Serverless Data**. In *Proceedings of the 38th International Conference on Massive Storage Systems and Technology (MSST 2024)*. [paper]

4. Katherine Wu and Jeffrey Heinz. **String Extension Learning Despite Noisy Intrusions**. In *Proceedings of the 16th International Conference on Grammatical Inference (ICGI 2023)*. [paper]

Talks

1. *Type-Directed Discretization of Probabilistic Programs*
 - OOPSLA 2026, October 2026.
 - Cornell PLDG, April 2026.
 - Cornell PL Retreat, May 2025.
2. *LP-LM: No Hallucinations in Question Answering with Logic Programming*
 - ICLP 2024, October 2024.
3. *String Extension Learning Despite Noisy Intrusions*
 - ICGI 2023, July 2023.
 - Stony Brook URECA Symposium, May 2023.

Awards and Honors

National Science Foundation Graduate Research Fellowship	2024
Tau Beta Pi Engineering Honor Society	2021
Computer Science Honors Program, Stony Brook University	2020
Presidential Scholarship, Stony Brook University	2020

Teaching

Graduate Teaching Assistant <i>Cornell University, Department of Computer Science</i> CS 4850: Probability, Vectors, and Matrices in Computing	Spring 2025
Graduate Teaching Assistant <i>Cornell University, Department of Computer Science</i> CS 4820: Introduction to Analysis of Algorithms	Fall 2024
Undergraduate Teaching Assistant <i>Stony Brook University, Department of Computer Science</i> CSE 150: Foundations of Computer Science (Honors)	Fall 2021
Grader and Teaching Assistant <i>Art of Problem Solving</i> Various math courses including number theory, combinatorics, and group theory	Summer 2021

Service

Academic

Artifact Evaluation Committee: TACAS 2027, ATVA 2026, TACAS 2026

Departmental

Cornell CS Fellowship Czar	Spring 2026–
Cornell CS Student-Applicant Support Program, Volunteer	Fall 2024, Fall 2025, Fall 2026
Cornell CS Visit Day, Volunteer	Spring 2025

Mentoring

Cornell Math + AI Lab, Mentor

Fall 2026–

Cornell MAC Doctoral Peer Mentoring Club, Mentor

Fall 2026–