

EDUCATION

- Carnegie Mellon University** **Aug 2023 — Dec 2024**
Master of Science in Machine Learning, GPA: 3.72/4.0
 Courses: Deep Learning, Intermediate Statistics, Probabilistic Graphical Models, Convex Optimization, ML with Large Datasets
- University of Michigan, Ann Arbor** **Aug 2020 — Apr 2023**
Bachelor of Science in Honors Mathematics, Honors Computer Science, GPA: 3.87/4.0.
 Thesis: *Differentially Private Algorithms on Dynamic Graph Sequences*
 Courses: Honor Analysis/Algebra, Combinatorics, Probabilities, Data Structure and Algorithms, Measure Theory, Information Theory, Numerical Linear Algebra, Database Systems, Program Synthesis, Programming Languages, Human-Centered Software Design
- University of Illinois at Urbana-Champaign** **Aug 2019 — May 2020**
Bachelor of Science in Chemical Engineering, GPA: 3.98/4.0

RESEARCH EXPERIENCE

- Research Project in Machine Learning
Privacy and Safety of Machine Learning, Advised by Prof. Virginia Smith and Prof. Steven Wu **June 2023 — Present**
- Published **NeurIPS workshop paper** on machine **unlearning attack schemes for language models**
 - Investigating the drawbacks of current measures of error in differential privacy and proposing new measures
 - Establishing machine unlearning goals and tasks for text-to-image generative models
 - Researching the fundamental underlying principles of generalization techniques in differential privacy
 - Investigating unlearning as a viable way to perform data attribution
- Research Project in Computer Science
Isoperimetry Properties on Real World Datasets, Advised by Prof. Wei Hu **June 2022 — Apr 2023**
- Investigated isoperimetry properties on datasets such as MNIST and CIFAR10 using Lipschitz neural networks
 - Devised and implemented different evaluation techniques using PyTorch and Weights & Biases
 - Extended the technique as an intrinsic dimension estimation
- Research Experiences for Undergraduates (REU), Honors Thesis
Differentially Private Algorithms for Graph Sequences, Advised by Prof. Martin Strauss **May 2022 — Apr 2023**
- Researched and implemented differentially private graph algorithms using Laplace mechanism
 - Improved the algorithms on error bounds and discovered a tighter error bound on natural temporal graphs

WORK EXPERIENCE

- Deep Learning Intern** **Jun 2024 — Aug 2024**
W. W. Grainger *Lake Forest, IL*
- Led project on bridging domain gap between synthetic and real-world data through **generative AI**
 - Applied methods such as canny edge detection, ControlNet, Stable Diffusion, and textual inversion to synthetic data generation
 - Improved drawer detection model accuracy by **5 percent** through incorporation of new synthetic datasets
- Teaching Assistant** **Aug 2024 — Dec 2024**
10-708 Probabilistic Graphical Models, Carnegie Mellon University *Pittsburgh, PA*
- Designed homework problems and recitation materials on graphical models and probabilistic methods
 - Mentored students on related projects such as probabilistic reasoning, diffusion models, etc.

PUBLICATIONS

S. Hu, Y. Fu, S. Wu, V. Smith. *Jogging the Memory of Unlearned LLMs Through Targeted Relearning Attacks*. Neurips Safe Generative AI Workshop 2024

SERVICES & AWARDS

- Reviewer, ICLR '25** **Nov 2024**
- High Honors in Mathematics, University of Michigan** **Apr 2023**
- James B. Angell Scholar, University of Michigan** **Mar 2022**
- Multidisciplinary Design Program Fellowship, University of Michigan** **Jun 2021**