

BOBBY SHI

bhshi@utexas.edu

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN

Ph.D., Electrical and Computer Engineering

Advised by Rachel Ward

Expected May 2025

GPA: 3.96

UNIVERSITY OF CHICAGO

M.S., Computer Science

June 2020

UNIVERSITY OF CHICAGO

B.S., Mathematics

June 2020

Overall GPA: 3.754

Major GPA: 3.840

PUBLICATIONS

Preprints

1. Joe Neeman, Bobby Shi, and Rachel Ward. Concentration inequalities for sums of markov dependent random matrices, 2023.

Conference papers

1. Yuege Xie, Bobby Shi, Hayden Schaeffer, and Rachel Ward. Shrimp: Sparser random feature models via iterative magnitude pruning. In *Proceedings of the 3rd Mathematical and Scientific Machine Learning Conference*.

Journal papers

1. Abolfazl Hashemi, Hayden Schaeffer, Robert Shi, Ufuk Topcu, Giang Tran, and Rachel Ward. Generalization bounds for sparse random feature expansions. *Applied and Computational Harmonic Analysis*, 2022.

TEACHING EXPERIENCE

Foundations of Machine Learning - *University of Texas at Austin, Teaching Assistant*

Linear Algebra - *University of Chicago, Teaching Assistant*

Abstract Linear Algebra - *University of Chicago, Teaching Assistant*

HONORS AND AWARDS

Engineering Fellowship - *University of Texas at Austin*

2020

Liew Family Research Grant Recipient - *University of Chicago*

2019

President's Scholar - *University of Chicago*

2016

GRADUATE COURSEWORK

Advanced Probability in Learning, Inference and Networks
Approximation Algorithms and Complexity
Geometric Methods in Data Science
Foundational Techniques of Machine Learning and Data Sciences
Automated Logical Reasoning
Convex Optimization
Probability and Stochastic Processes
Combinatorial Optimization
Introduction to the Theory of Machine Learning - *TTIC*
Spectral Methods for Machine Learning and Network Analysis - *University of Chicago*
Inverse Problems and Data Assimilation - *University of Chicago*

SERVICE

Reviewer - *AISTATS* *2024*
Mathematics Directed Reading Program - *University of Texas at Austin* *Fall 2022, Summer 2023*

TECHNICAL SKILLS

Python, including frameworks such as PyTorch, TensorFlow, JAX
Julia
MATLAB
C
SQL