Lijia Zhou

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Address: 5747 South Ellis Avenue – Chicago, IL 60637

Education

University of Chicago

Ph.D. student in Statistics, Advisor: Prof. Nathan Srebro   **2018 – Present**
B.S. in Applied Mathematics
B.S. in Statistics   **2015 – 2018**

Selected Coursework

Machine learning:
- Natural Language Processing, Deep Generative Models, Statistical and Computational Learning Theory

Statistical inference:
- Generalized Linear Model, Time Series Analysis, High Dimensional Statistics, Robust and Semiparameteric Statistics, Nonparameteric Statistics, Multiple testing and Modern Inference, Measure Theoretical Probability, Topic in Random Matrix theory

Research

I am interested in the statistical foundation of machine learning. With the hope of bridging the gap between the classical statistical learning theory with modern practices in data science, I have been trying to understand how over-parameterized models that memorize the training data (such as a deep neural network) can generalize to unseen data through the prism of **implicit regularization** and **uniform convergence**.

Publications

Uniform Convergence of Interpolators: Gaussian Width, Norm Bounds and Benign Overfitting
with Frederic Koehler, Danica J. Sutherland and Nathan Srebro
- under review

On Uniform Convergence and Low-Norm Interpolation Learning
with Danica J. Sutherland and Nathan Srebro
- published at *Conference on Neural Information Processing Systems (NeurIPS) 2020*
- Spotlight (top 2.9% of submissions)

Consulting

Participated in statistical consulting program that offers advice on data analysis to researchers from other departments within the university:
- *Higher-order-thinking talk (HOTT) in parent-child interaction*, Fall 2019
- *Medication discrepancies and blood pressure control in Botswana hypertension clinics*, Winter 2019

Teaching

Teaching Assistant:
- *Introduction to Random Matrices* (Winter 2021)
- *Statistical Theory and Methods* (Autumn 2020, Autumn 2019 & Winter 2019)
- *Convex Optimization* (Winter 2020)
- *Optimization* (Spring 2019)

Skills

- Programming: Python (PyTorch, scikit-learn), R, MATLAB, SQL, LaTeX
- Language: English, Mandarin, Cantonese