Jianliang He

Kline Tower, 219 Prospect Street, New Haven, CT 06511

Phone: (+1) 203-410-5714 | Email: jianliang.he@yale.edu

RESEARCH INTERESTS

Machine Learning Theory; Selective Inference; Foundation Model.

EDUCATION

Yale University 2024.9 - Present
Department of Statistics and Data Science New Haven, CT
Ph.D. in Statistics

Fudan University 2020.9 - 2024.6
Department of Statistics and Data Science, School of Management Shanghai, China
B.S. in Statistics

RESEARCH PAPERS

* stands for equal contribution or alphabetical ordering.

1. **He, J.**, Pan, X., Chen, S., Yang, Z. "In-Context Linear Regression Demystified: Training Dynamics and Mechanistic Interpretability of Multi-Head Softmax Attention". Submitted, 2025

2. Qin, S.*, **He, J.***, Gang, B, Xia, Y. "SAT: Data-light Uncertainty Set Merging via Synthetics, Aggregation, and Test Inversion". Submitted, 2024.

3. **He, J.***, Chen, S.*, Zhang, F., Yang, Z. "From Words to Actions: Unveiling the Theoretical Underpinnings of LLM-Driven Autonomous Systems". *International Conference on Machine Learning (ICML)*, 2024.

4. **He, J.**, Zhong, H., Yang, Z. "Sample-Efficient Learning of Infinite-Horizon Average-Reward MDPs with General Function Approximation". *International Conference on Learning Representations (ICLR)*, 2024.

5. Banerjeea, T.*, Gang, B.*, **He, J.***. "Harnessing the Collective Wisdom: Fusion Learning using Decision Sequences from Diverse Sources". Submitted, 2023.

HONORS & AWARDS

First Prize Scholarship for Outstanding Students (Top 1%), Fudan University 2022 - 2023
Outstanding Award, Fudan Undergraduate Research Opportunity Program (FDUROP) 2022, 2023

TEACHING EXPERIENCE

Teaching Assistant, MANA130083.01 Nonparametric Statistics, Fudan University Spring, 2023

SKILLS & INTERESTS

Programming: Python, R, Matlab, SQL, C/C++, LaTeX.
Languages: Chinese (Native), English (Fluent).
Interests: Photography, Texas Holdèm.

SERVICE

Conference Reviewer: NeurIPS 2024, ICLR 2025, ICML 2025.