

Research focus

Machine learning, optimization, deep learning theory.

Education

2016–2022 **Ph.D. in Computer Science**, *University of Illinois Urbana-Champaign*.

Advisor: Matus Telgarsky.

2012–2016 **B.Eng. in Computer Science and Technology (the ACM class)**, *Shanghai Jiao Tong University*.

Internships

Summer 2021 **Research Intern**, *Google Research*.

Mentors: Satyen Kale, Pranjal Awasthi.

Summer 2019 **Research intern**, *Microsoft Research New York City*.

Mentors: Robert Schapire, Miroslav Dudík.

Summer 2017 **Software engineering intern**, *Google Inc.*

Mentor: Steve McLaughlin.

Publications

All peer-reviewed work

- [1] Ziwei Ji, Nathan Srebro, and Matus Telgarsky. Fast margin maximization via dual acceleration. In *ICML*, 2021.
- [2] Daniel Hsu, Ziwei Ji, Matus Telgarsky, and Lan Wang. Generalization bounds via distillation. In *ICLR*, 2021.
- [3] Ziwei Ji and Matus Telgarsky. Characterizing the implicit bias via a primal-dual analysis. In *ALT*, 2021.
- [4] Ziwei Ji and Matus Telgarsky. Directional convergence and alignment in deep learning. In *NeurIPS*, 2020.
- [5] Ziwei Ji, Miroslav Dudík, Robert E. Schapire, and Matus Telgarsky. Gradient descent follows the regularization path for general losses. In *COLT*, 2020.
- [6] Ziwei Ji and Matus Telgarsky. Polylogarithmic width suffices for gradient descent to achieve arbitrarily small test error with shallow relu networks. In *ICLR*, 2020.
- [7] Ziwei Ji, Matus Telgarsky, and Ruicheng Xian. Neural tangent kernels, transportation mappings, and universal approximation. In *ICLR*, 2020.
- [8] Ziwei Ji and Matus Telgarsky. Risk and parameter convergence of logistic regression. In *COLT*, 2019.
- [9] Ziwei Ji and Matus Telgarsky. Gradient descent aligns the layers of deep linear networks. In *ICLR*, 2019.
- [10] Ziwei Ji, Ruta Mehta, and Matus Telgarsky. Social welfare and profit maximization from revealed preferences. In *WINE*, 2018.

Preprints

- [1] Ziwei Ji, Justin D Li, and Matus Telgarsky. Early-stopped neural networks are consistent. *arXiv preprint arXiv:2106.05932*, 2021.

Service

◦ Reviewer for NeurIPS, ICLR, COLT, ICML, EC, ITCS, IEEE Transactions on Information Theory.

Teaching

Graduate teaching assistant, UIUC

◦ CS 598: Deep learning theory.

Fall 2020, Fall 2021

◦ CS 446: Machine learning.

Spring 2019

Skills

Python, C/C++, Java, PyTorch, Tensorflow, Git.