Ziwei Ji

✉ *ziweiji2@illinois.edu*

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.