Ziwei Ji

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Research focus

Machine learning, optimization, deep learning theory.

Education

2016–	**Ph.D. in Computer Science**, *University of Illinois Urbana-Champaign*.
	Advisor: Matus Telgarsky.
	Computer Science Excellence Fellowship.
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.
Fall 2015	**Research intern**, *The University of Hong Kong*.
	Mentor: Zhiyi Huang.

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
○ CS 446: Machine learning.	Spring 2019