

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*.
Shanghai Jiao Tong University Excellent Graduate.

Internships

- 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 and Matus Telgarsky. Directional convergence and alignment in deep learning. In *NeurIPS*, 2020.
- [2] Ziwei Ji, Miroslav Dudík, Robert E. Schapire, and Matus Telgarsky. Gradient descent follows the regularization path for general losses. In *COLT*, 2020.
- [3] Ziwei Ji and Matus Telgarsky. Polylogarithmic width suffices for gradient descent to achieve arbitrarily small test error with shallow relu networks. In *ICLR*, 2020.
- [4] Ziwei Ji, Matus Telgarsky, and Ruicheng Xian. Neural tangent kernels, transportation mappings, and universal approximation. In *ICLR*, 2020.
- [5] Ziwei Ji and Matus Telgarsky. Risk and parameter convergence of logistic regression. In *COLT*, 2019.
- [6] Ziwei Ji and Matus Telgarsky. Gradient descent aligns the layers of deep linear networks. In *ICLR*, 2019.
- [7] Ziwei Ji, Ruta Mehta, and Matus Telgarsky. Social welfare and profit maximization from revealed preferences. In *WINE*, 2018.

Preprints

- [1] Ziwei Ji and Matus Telgarsky. A refined primal-dual analysis of the implicit bias. 2019. [arXiv:1906.04540](https://arxiv.org/abs/1906.04540) [cs.LG].

Service

- Reviewer for NeurIPS 2020, ICLR 2020-2021, COLT 2018-2019, EC 2018, ITCS 2018.

Teaching

Graduate teaching assistant, UIUC

- CS 598: Deep learning theory.
- CS 446: Machine learning.

Fall 2020
Spring 2019