

# Weihang Xu

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## Research Interests

Deep learning theory, Representation learning, Optimization

## Education

- 2023 – Present    **University of Washington** – Seattle, United States  
**Paul G. Allen School of Computer Science & Engineering**  
Ph.D student  
Advisors: Simon S. Du, Maryam Fazel
- 2019 – 2023    **Tsinghua University** – Beijing, China  
**Institute for Interdisciplinary Information Sciences (Yao Class)**  
Bachelor of Engineering in Computer Science

## Publications

\* denotes equal contribution

**Over-Parameterization Exponentially Slows Down Gradient Descent for Learning a Single Neuron** ([paper](#))

Weihang Xu, Simon S. Du

*In Conference on Learning Theory (COLT) 2023*

*Oral presentation at High-dimensional learning dynamics workshop at ICML 2023*

**Combinatorial Bandits with Linear Constraints: Beyond Knapsacks and Fairness** ([paper](#))

Qingsong Liu\*, Weihang Xu\*, Siwei Wang, Zhixuan Fang.

*In Conference on Neural Information Processing Systems (NeurIPS) 2022.*

## Awards and Honors

- Oct. 2022    Science and Technology Innovation Excellence Award – IIS, Tsinghua University  
Academic Excellence Award – IIS, Tsinghua University
- Nov. 2018    Chinese Mathematical Olympiad (CMO), Gold Medal (ranked 44<sup>th</sup> nationwide)