

# Weihsang Xu

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## Research Interests

Theoretical machine learning, Non-convex optimization, Online learning

## Education

2019 – Present     **Tsinghua University** – Beijing, China  
**Institute for Interdisciplinary Information Sciences (IIIS)**  
Bachelor of Engineering in Computer Science  
Yao Class, led by Prof. Andrew Yao  
GPA: 3.84/4.

## Publications

\* denotes equal contribution

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

**Weihsang Xu**, Simon S. Du

*In Conference on Learning Theory (COLT) 2023*

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

Qingsong Liu\*, **Weihsang 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 — IIIS, Tsinghua University  
Academic Excellence Award — IIIS, Tsinghua University

Nov. 2018     Chinese Mathematical Olympiad (CMO), Gold Medal (ranked 44<sup>th</sup> nationwide)

## Languages

English: TOEFL 110 (Aug. 2021)

*Reading: 30, Listening: 30, Speaking: 23, Writing: 27*

Chinese: native

German: basic