

ZHIYUAN FAN

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EDUCATION

- **Tsinghua University**, Bachelor of Computer Science and Technology Sept. 2019 - present
Institute for Interdisciplinary Information Science, (Yao Class, founded by Prof. Andrew Yao in 2005)
Overall GPA 3.90/4.00, Rank 8/30
Relevant Course: Machine Learning (A), Algorithm Design (A+), Theory of Computation (A+), Fundamentals of Cryptography (A+), Game Theory (A), Mathematics for Computer Science (A), Causal and Statistical Learning (A)

RESEARCH INTERESTS

- Theoretical Machine Learning, Learning Theory, Algorithms

PUBLICATIONS

(*: alphabet order)

- **The Exact Complexity of Pseudorandom Functions and Tight Barriers to Lower Bound Proofs**
Zhiyuan Fan*, Jiayu Li* and Tianqi Yang*
Electron. Colloquium Comput. Complex. 28: 125 (2021), *Accepted to STOC 2022*
Danny Lewin Best Student Paper Award

RESEARCH EXPERIENCE

- **Tsinghua University**, with **Prof. Jian Li** Mar. 2021- present
Proposed an efficient algorithm to solve learning mixtures of discrete distribution from noisy moments. We give the first method that runs in polynomial time and achieve theoretical optimal error bound without making any restricting assumptions. This new result improves all previous algorithms towards this problem.

ACADEMIC AWARDS

- **The International Collegiate Programming Contest**
 - Gold Medal (Second Place) in the ICPC Asia Shanghai Regional Contest Sept. 2019
 - Gold Medal in the ICPC Asia-East Continent Final Contest Dec. 2019
- **China Collegiate Programming Contest**
 - Gold Medal (Second Place) in the CCPC Qinghuangdao Regional Contest Sept. 2019
- Gold Medal in **National Olympiad in Informatics** (twice) July. 2017, 2018

SKILLS

- **Programming Languages:** C++, Python, Go, SQL, MATLAB
- **Tools and Frameworks:** PyTorch, Matplotlib, \LaTeX , Git, MySQL
- **Hobbies:** Tennis, Traveling