Chutong Yang

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Research Interests

Learning theory and algorithm design, with a particular focus on the following topics:

Trustworthy machine learning (algorithmic fairness, differential privacy, interpretability), optimization and applications in LLM and discrete diffusion.

Education

The University of Texas at Austin, Ph.D. in Computer Science — Aug 2023 – Present

- Supported by **Amazon AI PhD fellowship**
- Coursework: Continuous Algorithms, Stochastic Processes

Stanford University, M.S. in Computer Science — Sep 2021 – Jun 2023

- Full financial support for two years.
- Coursework: Machine Learning Theory, Optimization Algorithms, Deep Generative Models

University of California, San Diego, B.S. in Computer Science and Math — Sep 2016 – Jun 2020

- Overall GPA **3.944/4.0** CSE Major GPA: **3.98/4.0** Math Major GPA: **4.0/4.0**
- Coursework: Real Analysis series, Abstract Algebra series, Number Theory series, Unsupervised Learning, Algorithms for Big Data, Expander Graphs and High-Dimensional Expanders

Publications

(The authors are ordered alphabetically if no * mentioned)

Spherical Leech Quantization for Visual Tokenization and Generation — In Submission 2025

Yue Zhao*, Hanwen Jiang, Zhenlin Xu, ***Chutong Yang***, Ehsan Adeli, Philipp Krähenbühl

https://arxiv.org/abs/2512.14697

Anonymous Proportionality with Incomplete Votes — In Submission 2025

Zhiyi Huang, Gregory Kehne, ***Chutong Yang***

EC 2025 Workshop: New Directions in Social Choice

Private Geometric Median in Nearly-Linear Time — **NeurIPS** 2025

Syamantak Kumar, Daogao Liu, Kevin Tian, ***Chutong Yang***

TPDP 2025 Workshop
https://arxiv.org/abs/2505.20189

Omnipredicting Single-Index Models with Multi-Index Models — **STOC** 2025

Lunjia Hu, Kevin Tian, ***Chutong Yang***

https://arxiv.org/abs/2411.13083

Testing Calibration in Nearly-Linear Time — **NeurIPS** 2024

Lunjia Hu, Arun Jambulapati, Kevin Tian, ***Chutong Yang***

https://arxiv.org/abs/2402.13187

Omnipredictors for Constrained Optimization — **ICML** 2023

Lunjia Hu, Inbal Livni-Navon, Omer Reingold, ***Chutong Yang***

https://arxiv.org/abs/2209.07463

Active Learning Polynomial Threshold Functions — **NeurIPS** 2022

Omri Ben-Eliezer, Max Hopkins, ***Chutong Yang***, Hantao Yu

https://arxiv.org/abs/2201.09433

A Fast Exact Algorithm for Deployment of Sensor Nodes for Internet of Things — **ISF** 2022

Qinghua Zheng*, ***Chutong Yang***, Haijun Yang, Jianhe Zhou

Information Systems Frontiers: https://link.springer.com/article/10.1007/s10796-018-9890-3

Detailed placement for IR drop mitigation by power staple insertion in sub-10nm VLSI **DATE** 2019

Sun ik Heo, Andrew B Kahng, Minsoo Kim, Lutong Wang, ***Chutong Yang***

https://ieeexplore.ieee.org/abstract/document/8715096

Teaching and Research Experiences

Teaching Experience

- CS 395T Continuous Algorithms at UT Austin *Spring 2025*
- CS 353 Theory of Computation at UT Austin *Spring 2024*
- CS 109 Probability for Computer Scientists at Stanford *Spring 2023*
- CS 161 Design and Analysis of Algorithms at Stanford *Fall 2021*
- CSE 101 Design and Analysis of Algorithms at UCSD *Spring 2020, Winter 2021, Spring 2021*
- CSE 12 Basic Data Structure at UCSD *Fall 2017*

Research Experience

- Research Assistantship with funding from Prof. **Omer Reingold** *Winter 2022-Winter 2023*
- Research Assistantship with funding from Prof. **Aaron Sidford** *Summer 2022*

PROFESSIONAL SERVICE

Conference reviewer: NeurIPS 2024, ICLR 2025, ICML 2025, ITCS 2026

SKILLS

Languages and Tools: LaTeX, Python, Java, C, C++, Matlab, Pytorch, Linux