Yifei Wang

wangyiifei333@gmail.com | yiifeiwang.github.io | (650) 334-8431

PROFESSIONAL EXPERIENCE

Apple **Cupertino, CA**
Machine Learning Scientist in **Platform Architecture, Hardware Tech** *April 2025 to present*

EDUCATION

STANFORD UNIVERSITY **Stanford, CA**
Ph.D Candidate in **Electrical Engineering** *Graduated in April 2025*
GPA: **4.06 / 4.0**

- *Research Interests*: Large Language Models; Machine Learning Theory; Convex Optimization.

PEKING UNIVERSITY **Beijing, China**
Bachelor of Science in **Mathematical Science** *Graduated in June 2020*
Major GPA: **3.79 / 4.0**

- *Major*: **Information & Computing Science**
- *Honors*: Merit Student (*Fall 2019*); Outstanding Undergraduate in Beijing (Summer 2020)

SELECTED PUBLICATIONS

- Ertem Nusret Tas, David Tse, **Yifei Wang**, A Circuit Approach to Constructing Blockchains on Blockchains, Advances in Financial Technologies (AFT) 2024.
- **Yifei Wang**, Tolga Ergen, Mert Pilanci. "Parallel Deep Neural Networks Have Zero Duality Gap", ICLR 2023 Poster
- **Yifei Wang**, Tavor Baharav, Yanjun Han, Jiantao Jiao, David Tse. "Beyond the Best: Distribution Functional Estimation in Infinite-Armed Bandits", Neurips 2022 Poster
- **Yifei Wang**, Jonathan Lacotte, Mert Pilanci. "The Hidden Convex Optimization Landscape of Two-Layer ReLU Neural Networks: an Exact Characterization of the Optimal Solutions", ICLR 2022 Oral
- **Yifei Wang**, Kangkang Deng, Haoyang Li, Zaiwen Wen, "A Decomposition Augmented Lagrangian Method for Low-rank Semidefinite Programming", SIAM on Optimization (2023)

SELECTED WORK EXPERIENCE

PhD Intern at Apple *June 2024 – September 2024*
Supervised by Minda Deng and Frank Shi

- Applied machine learning techniques in platform architecture design

Research Assistant on Product Management for Bitcoin Staking *June 2023 – September 2023*
Supervised by Sankha Banerjee and David Tse

- Analyzed patterns in how the market type (bull market/bear market) influence user's behavior interact with Bitcoin, both in terms of transaction frequency and volume.
- Understood and quantified the price fluctuations of Bitcoin, Ethereum, Cosmos Hub, Osmosis and Juno to discern potential risks and investment strategies.

SELECTED RESEARCH EXPERIENCE

Randomized Geometric Algebra Methods for Convex Neural Networks *September 2023 – June 2024*
Supervised by Mert Pilanci

- Developed randomized algorithms within the framework of Clifford's Geometric Algebra to train neural networks to global optimality using convex optimization techniques.
- Demonstrated improved performance to finetune Large Language Models via feature-based transfer learning.

A Library of Mirrors: Deep Neural Nets in Low Dimensions are Convex Lasso Models with Reflection Features
Supervised by Mert Pilanci *September 2022 – June 2023*

- Proved that training neural networks on 1-D data is equivalent to solving convex Lasso problems with discrete, explicitly defined dictionary matrices.
- Applied these findings to a neural network-based autoregressive model for time series quantile regression, specifically predicting quantiles of Bitcoin prices.

CODING SKILLS

- **Professional:** Python, Matlab, C language, Markdown
- **Selected GitHub repository:** https://github.com/YiifeiWang/Bits-back-Coding https://github.com/pilancilab/IHS-BIN https://github.com/YiifeiWang/Accelerated-Information-Gradient-flow