

Wenlu Xu

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EDUCATION

University of California, Los Angeles (UCLA)

Ph.D. in Statistics & Data Science

Advisor: Xiaowu Dai, GPA: 3.97/4.0.

Los Angeles, CA, USA

09/2022-Present

Shandong University (SDU), Taishan College (Honors)

B.S. in Mathematics and Applied Mathematics (Ranking: Top 1)

Thesis Advisor: Tianyang Nie, GPA: 3.93/4.0 (92.71/100).

Jinan, Shandong, China

09/2018-06/2022

PAPERS

Double Machine Learning

- Xu, W., & Dai X. (2023). **A Contextual Bayesian-Incentive-Compatible Algorithm for Causal Bandit in Recommender Systems.** *Preprint 2023+*.

Kernel Estimation

- Xu, W., & Dai X. (2023). **Statistical Inference with Gradient Information.** *Preprint 2023+*.

Federated Learning

- Tao, Y., Cui, S., Xu, W., Yin, H., Yu, D., Liang, W., & Cheng, X. (2023). **Byzantine-Resilient Federated Learning at Edge.** *IEEE Transactions on Computers.* (Volume: 72, Issue: 9, 01 September 2023). [<https://ieeexplore.ieee.org/document/10070815>]

Privacy-Aware Computing

- Yu, D., Zhang, K., Tao, Y., Xu, W., Zou, Y., & Cheng, X. (2023). **Correlation-Aware and Personalized Privacy-Preserving Data Collection.** *2024 International Conference on Computing, Networking and Communications (ICNC) - ICNC'24 Invited Papers.* (Presented in session CIS-3: CIS III).

Stochastic Differential Equation

- Xu, W., & Nie T. (2022). **Fair Pricing for American Options in Nonlinear Market.** *Outstanding Thesis Award at SDU.*
- Xu, W., Liu, Z., Ren, Y., & Fu, M. (2021). **The Application of Differential Equations in the SIR Model — Taking COVID-19 as an Example.** *National Undergraduate Innovation & Entrepreneurship Training Program. (Fully sponsored).*

Miscellaneous

- Xu, W., Chen L., & Huang Y. (2020). **Designing the Optimal Plan for Crossing the Desert in a Virtual Game.** *Shandong Provincial First Prize in the 2020 Contemporary Undergraduate Mathematical Contest in Modeling. (Top 5%).*

AWARDS AND HONORS

Academic

- Summer Mentored Research Fellowship (Top 4) 2022 UCLA
- Dean's Award (Top 1) 2022 SDU
- National Third Prize in the National Undergraduate Mathematical Contest 2020-2021 China
- Academic scholarship of First Prize (Top 2) 2019-2021 SDU

Comprehensive Qualities

- National Merit Scholarship (Top 0.2%) 2021 China
- Sunflower Scholarship by Industrial and Commercial Bank of China (Top 1) 2020 China ICBC
- Merit Student of Shandong University (Top 2) 2019 SDU

Leadership

- Outstanding Student Leader of Taishan College 2019-2020 SDU

ACADEMIC SERVICE

Journal Reviewer

STAT

2023-Present

INVITED TALKS

Double Machine Learning Workshop

UCLA

Speaker, the Summer Institutes in Computational Social Science (SICSS)

06/2023

- An One-hour workshop introducing double machine learning to students and professors in social science.

PROFESSIONAL EXPERIENCES

China Securities

Beijing, China

Part-time Assistant, Asset Management Dept.

10/2021-11/2021

- Mined stock factors by genetic programming, using Python.
- Developed multi-factor investment strategies and built a pool of selective stocks.

Tensor Pacific

Shanghai, China

Quantitative Trading Strategy Development Engineer Intern, Investment Research Dept.

08/2021-12/2021

- Developed a future prediction algorithm with 92% accuracy based on deep learning, using Python.
- Developed a multi-asset allocation strategy with 1% retracement in 5 months.

TF Securities

Shanghai, China

Analyst Intern, Investment Banking Headquarters.

07/2021

- Performed due diligence for 4 projects, and successfully detected the reasons for unsuccessful M&A of a metal group.

Goldman Sachs

Remote

Part-time Assistant, Consumer and Investment Management Dept.

04/2021-06/2021

- Created a technical documentation, and established a framework with custom classes.
- Visualized stock price data and conducted backtests on certain strategies, using Python.

TEACHING EXPERIENCE

Academic Student Employee

UCLA

TA STATS-201B *Statistical Modeling and Learning*, Instructor: Xiaowu Dai.

Winter/2024

Special Reader STATS-211 *Topics in Economics and Machine Learning*, Instructor: Xiaowu Dai.

Winter/2024

TA STATS-10 *Introduction to Statistical Reasoning*, Instructor: Maria Cha.

Fall/2023

Undergraduate Teaching Assistant

SDU

TA *Mathematics Project in English: Writing and Presenting*, Instructor: Jordan Stoyanov.

Fall/2021

TA *Probability Theory*, Instructor: Tianyang Nie.

Fall/2020-2021

TA *Mathematical Analysis I & II*, Instructor: Zongyuan Huang.

2019-2021

OTHER INFORMATION

Computer Skills: Python, R, Java (China Computer Federation Accredited, Top 5.2%), MATLAB, Latex, C#.

Languages: English (fluent), Chinese (native).