

XINRAN WANG

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EDUCATION

University of Minnesota, Department of Computer Science and Engineering *Minneapolis, MN, USA*
Ph.D. student in Computer Science Aug 2023 - present

University of Minnesota, School of Statistics *Minneapolis, MN, USA*
Master of Science in Statistics, minor in Computer Science Jan 2021

Tsinghua University, School of Economics and Management *Beijing, China*
Master of Science in Economics Jul 2016
Bachelor of Science in Economics and Finance Jul 2012

Harvard University, Law School *Cambridge, MA, US*
Visiting Research Fellow Jan - Nov 2015

Queen's University, School of Business *Kingston, ON, Canada*
Exchange Student Sep - Dec 2010

RESEARCH INTEREST

AI safety, collaborative machine learning

PUBLICATIONS

- [1] **X. Wang**, Q. Le, A. Khan, J. Ding, A. Anwar, “[A Framework for Incentivized Collaborative Learning](#),” *arXiv preprint arXiv:2305.17052*, 2023.
- [2] A. Khan, **X. Wang**, Q. Le, A. Khan, H. Ali, J. Ding, A. Butt, A. Anwar, “[PI-FL: Personalized and Incentivized Federated Learning](#),” *arXiv preprint arXiv:2304.07514*, 2023.
- [3] C. Howe, **X. Wang**, and A. Anwar. “[Robust and Efficient Quantum Communication](#)” *Proceedings of the 2023 International Workshop on Quantum Classical Cooperative*, 2023.
- [4] Q. Le, E. Diao, **X. Wang**, A. Anwar, V. Tarokh and J. Ding, “[Personalized Federated Recommender Systems with Private and Partially Federated AutoEncoders](#),” *Asilomar Conference on Signals, Systems, and Computers*, 2022.
- [5] **X. Wang**, J. Zhang, M. Hong, Y. Yang, J. Ding, “[Parallel Assisted Learning](#),” *IEEE Transactions on Signal Processing (TSP)*, 2022.
- [6] **X. Wang**, Y. Xiang, J. Gao, J. Ding, “[Information Laundering for Model Privacy](#),” *International Conference on Learning Representations (ICLR)*, 2021, **spotlight presentation** (top 5.6%).
- [7] X. Xian, **X. Wang**, J. Ding, R. Ghanadan, “[Assisted Learning: A Framework for Multiple Organizations’ Learning](#),” *Advances in Neural Information Processing Systems (NeurIPS)*, 2020, **spotlight presentation** (top 3%).
- [8] Z. Zhao, A. Ahmadi, C. Hoover, L. Grado, N. Peterson, **X. Wang**, D. Freeman, T. Murray, A. Lamperski, D. Darrow, T.I. Netoff, “[Optimization of Spinal Cord Stimulation Using Bayesian Preference Learning and Its Validation](#),” *IEEE Trans Neural Syst Rehabil Eng.*, 2021.
- [9] **X. Wang**, X. Guo, Y. Song, S. Cao, T. Wu, X. Tian, Z. Li, “[The Impact of the Change of Trade Patterns on China’s Energy Industry](#),” *Procedia Computer Science*, 2018.

INDUSTRIAL EXPERIENCE

Senior Data Scientist, General Mills Minneapolis, MN Apr 2021 - Nov 2022

- Focused on Strategy and Growth. Used machine learning to identify novel growth opportunities
- Led the development and implementation of predictive intelligence models to support business objectives

Algorithms and Software Engineer, Kolmostar Inc. Fremont, CA Jun - Aug 2019

- Built a root cause analysis tool for chip malfunctioning using online streaming data from satellite signals
- Developed a python-based anomaly detection system, which increased antenna malfunction detection accuracy by 20%

Headquarter Management Trainee, Shanghai Pudong Development Bank Shanghai, China Jul 2016 - Dec 2018

- Rotated in corporate banking, credit card, and financial market
- Performed risk management and reported to the Chief Risk Officer

Investment Research Analyst, China Universal Asset Management Shanghai, China Jan - Feb 2016

- Analyzed public Consumer Goods companies

Investment Research Analyst, Beijing Jianguang Asset Management Co. Ltd Beijing, China Dec 2014

- Analyzed private Integrated Circuit and Semiconductor companies

RESEARCH EXPERIENCE

Research Assistant, University of Minnesota Minneapolis, MN Jan 2019 - Jan 2021

- Developed mathematical theory and algorithms for collaborative machine learning, data privacy, and model security, with publications at top AI/ML conferences and a US patent

Statistical Consultant, University of Minnesota Minneapolis, MN Jun - Aug 2020

- Designed multi-armed bandit models to optimize spinal cord stimulation for E-STAND clinical trials and built generalized linear mixed-effect models for validation

Visiting Scholar, Harvard University Cambridge, MA Jan - Nov 2015

- Conducted research on tax reform policies and their impact on businesses by analyzing firm-level administrative data. Utilized econometrics model to extract insights and draw conclusions that inform policy recommendations.

TEACHING EXPERIENCE

Teaching Assistant, University of Minnesota Minneapolis, MN Aug 2018 - Jan 2021

- Served five statistics courses with high student ratings
- *Introduction to Probability and Statistics* (STAT 3021, undergraduate), Fall 2020
- *Applied Regression Analysis* (STAT 5302, graduate), Spring 2020
- *Applied Statistics I* (STAT 4051, undergraduate), Fall 2019
- *Regression and Correlated Data* (STAT 3032, undergraduate), Spring 2019
- *Data Analysis* (STAT 3022, undergraduate), Fall 2018

Teaching Assistant, Tsinghua University Beijing, China 2013, 2014

- *History of Economic Thought* (undergraduate), Fall 2013, Fall 2014

HONORS

3M Fellowship, University of Minnesota 2023 - 2027

CS-IDEA Fellowship, Computer Science & Engineering, University of Minnesota 2023 - 2024

John N. Quiring Fellowship in Statistics (one per year), School of Statistics, University of Minnesota Jun 2020

Outstanding Graduate Award (top 2%), Tsinghua University Jul 2016

Outstanding Thesis Award (top 2%), Tsinghua University Jul 2016

SKILLS

Python, SQL, R, Git, Hadoop, Spark, Google Cloud Platform

LEADERSHIP & COMMUNITY SERVICES

Women in Machine Learning & Data Science Twin Cities Feb 2020 - present

Golden Toasters Toastmasters Club Oct 2020 - present

Consultant at the Department of Neurosurgery	Jun - Aug 2020
Cross-Cultural Leadership Retreat	Mar 2019
Volunteer for Harvard Law School Commencement 2015	May 2015
Student Ambassador for Tsinghua School of Economics & Management (SEM)'s 30th Anniversary	Mar - Apr 2014
Runner of Half Marathon of Beijing International Marathon	Oct 2013, Oct 2014