YANZHI WANG Ph.D.

(+86) 18310137817
yanzhiwang@pku.edu.cn

EDUCATION

College of Engineering, Peking University — Beijing, China
Ph.D. in Industrial and Systems Engineering — 2022 - 2027 *(expected)*
- Advisor: Prof. Jie Song
- Research area: Data-centric AI, Energy System, Data-driven Optimazation

College of Engineering, Peking University — Beijing, China
B.E. in Theoretical and Applied Mechanics — 2018 - 2022
- GPA: 3.62/4.00, Rank: 15/34.

National School of Development, Peking University — Beijing, China
B.E. in Economics (Dual Degree) — 2019 - 2022

RESEARCH STATEMENT

My research centers on advancing the interpretability of data science within energy systems. I am particularly interested in leveraging AI and other data-driven methodologies to implement end-to-end optimization, with a recent focus on enhancing the reliability and efficiency of energy systems under uncertainty through data-centric decision-making.

PUBLICATIONS

1. **Yanzhi Wang**, Jianxiao Wang, Feng Gao, Jie Song. Unveiling value patterns via deep reinforcement learning in heterogeneous data analytics. *Patterns*, 5(5), 2024. (Cover Article) DOI: 10.1016/j.patter.2024.100965

2. **Yanzhi Wang**, Jie Song. Dissecting Renewable Uncertainty via Deconstructive Analysis-Based Data Valuation. *IEEE Transactions on Industry Application*, 2024, early access. DOI: 10.1109/TIA.2024.3384130

3. **Yanzhi Wang**, Jianxiao Wang, Jie Song. Strategic Data Purification for Improved Power Dispatch Against Uncertainty: A Deep Reinforcement Learning Approach. *IEEE Transactions on Industrial Informatics*, 2024. (Under Review)

4. **Yanzhi Wang**, Jianxiao Wang, Haoran Zhang, Jie Song. Bridging Prediction and Decision: Advances and Challenges in Data-Driven Optimization. *Nexus*, 2024. (Under Review)

5. Yihang Jin, **Yanzhi Wang**, Jianxiao Wang, et al. Condensed Data Acquisition for Non-Intrusive Load Monitoring via Household Selection. *IEEE Transactions on Industrial Informatics*, 2024. (Under Review)

6. **Yanzhi Wang**, Jianxiao Wang, Jie Song. Feature Valuation Toward Improved State Estimation for Automotive Lithium-ion Battery. *2024 IEEE Industry Applications Society Annual Meeting (IAS)*, 2024. (Accept)

7. **Yanzhi Wang**, Yue Zhao, Jie Song, Hongju Liu. What drives patients to choose a physician online? A study based on tree models and SHAP values. *2022 IEEE 18th International Conference on Automation Science and Engineering (CASE)*, 2022. DOI: 10.1109/CASE49997.2022.9926467

Awards & Honors

- **The Youth Talent Support Program of the China Association for Science and Technology (Doctoral Program)** 2024.10
- **National Scholarship** 2024.09
- **Wei-Ming PhD Scholars,** Peking University 2024.06
  One of 13 recipients selected university-wide.
- **Academic Rising Star,** College of Engineering, Peking University 2024.05
  One of 5 recipients selected college-wide.

Skills

Programming: `Python`, `MATLAB`, `R`.

Academic Training: *Advanced Theory of Probability, Advanced Operations Research, Optimization Methods in Machine Learning, Reinforcement Learning, Distributed Optimization, Design and Analysis of Algorithms, Carbon Neutrality and Energy Internet, etc.*

Internships

Beijing International Big Data Exchange. | Beijing, China 2022.07 - 2022.08
- Research data trading and circulation mechanisms.
- Advance enterprise data integration and data pricing projects.