TIANFU WANG

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EDUCATION

Research interests include Data Mining, Reinforcement Learning, and Large Language Model.

Hong Kong University of Science and Technology, Guangzhou (HKUST-GZ) Starting Fall 2025
Ph.D. in Artificial Intelligence (AI). Supervised by Prof. Hui Xiong (Associate Vice-President of HKUST-GZ).

University of Science and Technology of China (USTC) 2022 – NOW
M.S. in Computer Science (CS). Supervised by Prof. Hui Xiong (also the Fellow of AAAS and IEEE).

Chongqing University (CQU) 2018 – 2022
B.S. in Software Engineering (SE). Rank: 6/254 (Top 3%). GPA: 3.78/4.00; Grade: 90.11.

EXPERIENCE

Microsoft Inc. - Research Intern (Mentor: Dr. Nicholas Jing Yuan) 2024.05 – NOW
Focus on large language models (LLM) for educational tutoring and productivity enhancement.

HKUST-GZ - Research Assistant (Mentor: Prof. Chao Wang) 2024.03 – 2024.05
Investigated complex constraint management within combinatorial optimization problems [4].

MSRA - Research Intern (Mentor: Dr. Jianxun Lian) 2023.08 – 2023.12
Researched Web3 mining [1] and the application of LLM-based agents in educational scenarios.

Microsoft Inc. - Research Intern (Mentor: Dr. Nicholas Jing Yuan) 2022.06 – 2023.12
Developed data-driven valuation [1] and profit-aware generation [8] of non-fungible token (NFT).

JD.COM Inc. - Research Intern (Mentor: Prof. Li Shen) 2021.08 – 2022.04
Focused on machine learning for combinatorial optimization (CO) in cloud computing [3].

AWARDS

National Scholarship (2024, 2021); *National Encouragement Scholarship (2019)*; *Zhu-Jingwen Scholarship (2020)*; *USTC Academic Scholarship×3*; *CQU Excellent Student Scholarship×4*

***Outstanding Undergraduate Thesis, Chongqing City* (2023)**; *Smart Dock Future Star, Huawei Inc.*(2021); *Outstanding Student, CQU* (2022); *Excellent Student Cadres, CQU* (2019);

National First Prize, China Collegiate Computing Contest - Network Technology Challenge (2021); *M Prize, International Mathematical Contest in Modeling (2021)*; *Other National Third Prizes × 3*;

SKILLS

- **Algorithm**: Graph Learning; Reinforcement Learning; Combinatorial Optimization; LLM
- **Development**: Backend (Django, SpringBoot); Frontend (Vue, React); SQL; Smart Contract
- **Others**: Slide Making; Video Editing; Figma Design; Photography; Marathon Running;

OTHERS

- **Exchange & Visits**: Participated in the AI exchange program of *University of Cambridge*, UK (2021), and the Intelligent Computing visiting program of *University of Tokyo* and *Waseda University*, Japan (2020).
- **Open-source Contributions**: Independently developed the algorithm library on networking resource allocation, *Virne* (Star 90+), and maintains the paper collection project in this field (Star 100+).
- **Community Involvement**: A prospective member of *Datawhale*, a well-known open-source organization, and a core contributor to the *Statistical Learning Method Problem Solving* project (Star 1.7K+).

PUBLICATIONS (#: EQUAL CONTRIBUTION)

[1] **Tianfu Wang**, Liwei Deng, Chao Wang, Jianxun Lian, Yue Yan, Nicholas Jing Yuan, Qi Zhang, and Hui Xiong. Comet: Nft price prediction with wallet profiling. In *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD**)*, 2024. (CCF-A, CORE A*).

[2] **Tianfu Wang**, Qilin Fan, Chao Wang, Leilei Ding, Nicholas Jing Yuan, and Hui Xiong. Flagvne: A flexible and generalizable reinforcement learning framework for network resource allocation. In *International Joint Conference on Artificial Intelligence (**IJCAI**)*, 2024. (CCF-A, CORE A*).

[3] **Tianfu Wang**, Shen Li, Qilin Fan, Tong Xu, Tongliang Liu, and Hui Xiong. Joint admission control and resource allocation of virtual network embedding via hierarchical deep reinforcement learning. *IEEE Transactions on Services Computing (**TSC**)*, 2023. (CCF-A, CORE A*, JCR-Q1).

[4] **Tianfu Wang**, Long Yang, Chao Wang, Chuan Qin, Liwei Deng, Li Shen, and Hui Xiong. Conal: Towards constraint-aware learning for resource allocation in network virtualization. In *International Conference on Learning Representations (**ICLR**)*, 2024. (CCF-A, CORE A*, Under Review).

[5] **Tianfu Wang**, Yi Zhan, Jianxun Lian, Zhengyu Hu, Liwei Deng, Nicholas Jing Yuan, Qi Zhang, Xing Xie, and Hui Xiong. Llm-powered multi-agent framework for goal-oriented learning in intelligent tutoring system. In *ACM Web Conference (**WWW**)*, 2025. (CCF-A, CORE A*, Under Review).

[6] **Tianfu Wang**, Qilin Fan, Xiuhua Li, Xu Zhang, Qingyu Xiong, Shu Fu, and Min Gao. Drl-sfcp: Adaptive service function chains placement with deep reinforcement learning. In *IEEE International Conference on Communications (**ICC**)*, 2021. (CCF-C, CORE B).

[7] Liwei Deng#, **Tianfu Wang#**, Yan Zhao, and Kai Zheng. Million: A general multi-objective framework with controllable risk for portfolio management. In *Proceedings of the VLDB Endowment (**VLDB**)*, 2025. (CCF-A, CORE A*).

[8] Huiguo He, **Tianfu Wang**, Huan Yang, Jianlong Fu, Nicholas Jing Yuan, Jian Yin, Hongyang Chao, and Qi Zhang. Learning profitable nft image diffusions via multiple visual-policy guided reinforcement learning. In *ACM International Conference on Multimedia (**MM**)*, 2023. (CCF-A, CORE A*).

[9] Leilei Ding, Dazhong Shen, Chao Wang, **Tianfu Wang**, Le Zhang, and Yanyong Zhang. Dgr: A general graph desmoothing framework for recommendation via global and local perspectives. In *International Joint Conference on Artificial Intelligence (**IJCAI**)*, 2024. (CCF-A, CORE A*).

[10] Qilin Fan, Yue Niu, Hao Yin, **Tianfu Wang**, Xiuhua Li, and Jinlong Hao. Gat-il: A service function chain deployment method based on graph attention network and imitation learning. *Acta Electronica Sinica*, 2023. (CCF-A, In Chinese).

[11] Liwei Deng, Penghao Chen, Ximu Zeng, **Tianfu Wang**, Hao Miao, Yan Zhao, and Kai Zheng. Efficient data-aware distance comparison operations for high-dimensional approximate nearest neighbor search. In *Proceedings of the VLDB Endowment (**VLDB**)*, 2025. (CCF-A, CORE A*).

[12] Liwei Deng, Fei Wang, **Tianfu Wang**, Yan Zhao, Yuyang Xia, and Kai Zheng. Exact and efficient similar subtrajectory search: Integrating constraints and simplification. In *IEEE International Conference on Data Engineering (**ICDE**)*, 2025. (CCF-A, CORE A*, Revision).

[13] JunYang Wang, Lan Zhang, Yihang Cheng, Mu Yuan, and **Tianfu Wang**. Exact and efficient similar subtrajectory search: Integrating constraints and simplification. In *IEEE International Conference on Data Engineering (**ICDE**)*, 2025. (CCF-A, CORE A*, To-be Submitted).

[14] Fei Wang, Qilin Fan, **Tianfu Wang**, Xu Zhang, Xiuhua Li, and Hao Yin. Ikenga: Infeasibility knowledge-enhanced genetic algorithm for virtual network embedding. *IEEE Transactions on Green Communications and Networking (**TGCN**)*, 2023. (JCR-Q2, Under Review).

SERVICES

- **Conference Reviewer**: ICLR'25; NeurIPS'24; WWW'24; ACM MM'23, 24;