Yansen Zhang

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EDUCATION

2025.09–2025.12;	**Visiting Student**, Machine Learning, Mohamed bin Zayed University of Artificial Intelligence Supervisor: Prof. Steve Liu
2022.09–Present;	**Ph.D. Candidate in Computer Science**, Computing, City University of Hong Kong Supervisor: Dr. Chen Ma
Research Interests:	Trustworthy Decisions; LLMs for OR; Data Valuation
2019.09–2022.06;	**M.S. in Software Engineering**, Computer Science and Engineering, Sun Yat-sen University GPA: 93.81/100 | Supervisor: Prof. Yubao Liu
Research Interests:	Sequence-aware recommendation; Graph neural network
2015.09-2019.06;	**B.S. in Software Engineering**, Software College, Northeastern University GPA: 3.66/5 | Advisor: Prof. Guibing Guo Postgraduate Candidates Exempt from Admission Exam

PROFESSIONAL EXPERIENCES

2022.04–Present;   **Research on Trustworthy Recommendation**, City University of Hong Kong.

➤ Proposed a general data pruning framework by Shapley values in the recommendation. This work has been accepted by conference *KDD 2025*.

➤ Proposed a general framework of explainable diversity in the recommendation. This work has been accepted by conference *ECML PKDD 2025*.

➤ Presented a unified taxonomy of diversification metrics and approaches in retrieval systems from both the search and recommendation perspectives. This work has been accepted by journal *TKDE 2024*.

2019.09–2022.06;   **Research on Graph-based Sequence-aware Recommendation**, Sun Yat-sen University.

➤ Focused on graph-based sequential recommendation mainly. Proposed a framework for sequential recommendation by a self-adaptive graph neural network with future contexts. This work has been accepted by conference *ICONIP 2021*.

2018.10–2019.06;   **Research on Explainable Recommendation**, Northeastern University.

➤ Undergraduate Thesis: *Research and Implementation of Explainable Recommendation Based on Feature Fusion*. Achieved excellent score for the overall work.

RESEARCH INTERN EXPERIENCES

2024.06–2025.08;   **Research on LLMs for Operations Research**, Huawei Noah's Ark Lab.

➤ Proposed a unified framework of explainable operations research within large language models. In this work, we formulated the problem of explainable operations research within LLMs, and then we designed a unified framework to solve this problem, and also developed a benchmark to verify this issue. This work has been accepted to conference *ICLR 2025*.

➤ Proposed an iterative correction framework that improves the modeling ability in optimization. This work has been submitted to conference ICLR 2026.

➤ Proposed a framework that compiles external knowledge into executable rules for forecast adjustment by LLMs and optimization methods. This work is intended to be submitted to conference ICML 2026.

CONFERENCE PUBLICATIONS

1. **Yansen Zhang**, Bowei He, Xiaokun Zhang, Haolun Wu, Zexu Sun, and Chen Ma (2025). *Counterfactual Multi-player Bandits for Explainable Recommendation Diversification*. In: *ECML PKDD. [code]*.

2. **Yansen Zhang**, Qingcan Kang, Wing Yin Yu, Hailei Gong, Xiaojin Fu, Xiongwei Han, Tao Zhong, and Chen Ma (2025). *Decision Information Meets Large Language Models: The Future of Explainable Operations Research*. In: *ICLR. [code]*.

3. **Yansen Zhang**, Xiaokun Zhang, Ziqiang Cui, and Chen Ma (2025). *Shapley Value-driven Data Pruning for Recommender Systems*. In: *KDD. [code]*.

4. Chenhao Hu, Shuhua Huang, **Yansen Zhang**, and Yubao Liu (2022). *Learning to Infer User Implicit Preference in Conversational Recommendation*. In: *SIGIR*.

5. **Yansen Zhang**, Chenhao Hu, Genan Dai, Weiyang Kong, and Yubao Liu (2021). *Self-Adaptive Graph Neural Networks for Personalized Sequential Recommendation*. In: *ICONIP. [code]*.

JOURNAL PUBLICATIONS

1. Shuliang Wang, Jiabao Zhu, Yi Wang, Chen Ma, Xin Zhao, **Yansen Zhang**, Ziqiang Yuan, and Sijie Ruan (2025). *Hierarchical Gating Network for Cross-Domain Sequential Recommendation*. *TOIS*.

2. Haolun Wu*, **Yansen Zhang***, Chen Ma, Fuyuan Lyu, Bowei He, Fernando Diaz, and Xue Liu (2024). *Result Diversification in Search and Recommendation: A Survey*. *TKDE. [code]*.

ONGOING PUBLICATIONS

1. **Yansen Zhang**, Qingcan Kang, Yujie Chen, Yufei Wang, Xiongwei Han, Tao Zhong, Mingxuan Yuan, and Chen Ma (2025). *SAC-Opt: Semantic Anchors for Iterative Correction in Optimization Modeling*. In: *arXiv*.

PATENTS

1. Yubao Liu, **Yansen Zhang** (2021). "*A method for sequential recommendation model and sequential recommendation method.*" Chinese patent, 202111051076.3. Sun Yat-sen University.

INVITED TALKS

2025.08.26; *Explainable Recommendation via Bandit Optimization and Data Valuation* in *Huawei Consumer Device Generative Recommendation Workshop*, Huawei Hong Kong Research Center.

TEACHING EXPERIENCES

Semester B 2022/23, 2023/24, 2024/25; **GE2324: The Art and Science of Data**, City University of Hong Kong.
Semester A 2022/23, 2023/24, 2024/25; **CS2334: Data Structures for DS**, City University of Hong Kong.
2019.10-2020.06; **Mathematical Analysis**, Sun Yat-sen University.

KEY SKILLS

➤ **Programming:** Python, C/C++, LaTeX, Markdown, Matlab, SQL.
➤ **Frameworks/Platforms:** PyTorch, Linux, TensorFlow, Keras.
➤ **Software Tools:** Git, Visio, PhotoShop, MS Office.
➤ **Languages:** Chinese (native), English (IELTS 6.5).

SELECTED HONORS AND AWARDS

2021–2022;	**Graduate Student Second–class Academic Scholarship**,	Sun Yat-sen University
2019–2021;	**Graduate Student First–class Academic Scholarship**,	Sun Yat-sen University
2018;	**Interdisciplinary Contest in Modeling** (international-level),	Honorable Mention
2017–2018;	**Excellent League Member Model** (top 5%, departmental),	Northeastern University
2015–2017;	**Excellent Students Awards** (top 5%, departmental),	Northeastern University
2015–2018;	**The Second Prize Scholarship**,	Northeastern University
2015–2018;	**National Encouragement Scholarship**,	Northeastern University