Peiyan, Zhang

Contact Information

Hong Kong University of Science and Technology,
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Personal Web
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Google Scholar

Research Interests

- Large Language Models and Multi-Agent Systems
- Multimodal Understanding
- Trustworthy AI: Robustness, Interpretability, Privacy, and Fairness
- Deep Learning on Graphs

Education

The Hong Kong University of Science and Technology, Hong Kong 08/2020 – 07/2025

- Ph.D., Computer Science and Engineering
- Supervisor: Prof. Yangqiu Song

Beijing Institute of Technology, China 09/2016 – 07/2020

- Bachelor of Science, Computer Science, **GPA: 3.94/4.0, Ranking: 1/193**

Intership Experience

University of Illinois Urbana-Champaign, USA 08/2022 – Present
Research Collaboration with Prof. Haohan Wang

Microsoft Software Technology Center Asia, Beijing 05/2024 – 05/2025
Research Intern

Beijing Academy of Artificial Intelligence, Beijing 06/2023 – 12/2023
Research Intern

Microsoft Research Asia, Beijing 03/2022 – 04/2023
Research Intern

Honors and Awards

- Excellence in Review Award by Future Generation Computer Systems (FGCS) 2025
- ACM SIGIR Student Travel Grant for SIGIR 2024 2024
- **Winners of Amazon KDD Cup 2023 Challenge (3rd Place in the World)** 2023
- Award of Excellence of Stars of Tomorrow Internship Program in Microsoft Research Asia (Top 10%) 2023
- **Best Paper Award - Honorable Mention in WSDM 2023** 2023
- HKUST RedBird PhD Scholarship 2020
- Graduate Excellence Award of Beijing (top 1%) 2020
- National Scholarship for 2018-2019 Academic Year (top 0.2%) 2019
- National Scholarship for 2017-2018 Academic Year (top 0.2%) 2018
- National Scholarship for 2016-2017 Academic Year (top 0.2%) 2017
- Honorable Mention in Mathematical Contest in Modeling/Interdisciplinary Contest in Modeling 2019
- First-class Scholarship (for six semesters) 2019
- First Prize of Dots and Boxes Project in the 13th China Computer Game Championship 2019
- Third Place in the Simulation Game of the Medium Size Group in 2018 China Robot Competition 2018

PUBLICATION

GoogleScholar:
https://scholar.google.com/citations?hl=en&user=A1_FpIcAAAAJ&view_op=list_works
- Impact: 600+citations, h-index: 13

Selected Preprints

- "Reasoning Can Hurt the Inductive Abilities of Large Language Models"
  Haibo Jin, **Peiyan Zhang,** Man Luo, Haohan Wang. 2025.
- "From Hallucinations to Jailbreaks: Rethinking the Vulnerability of Large Foundation Models"
  Haibo Jin, **Peiyan Zhang,** Peiran Wang, Man Luo, Haohan Wang. 2025.
- "RAGify: Understanding Graph Neural Networks with Retrieval-Augmented Generation for Enhanced Representation Learning on Graphs"
  Peiyan Zhang, et, al. 2025.
- "GuardVal: Dynamic Large Language Model Jailbreak Evaluation for Comprehensive Safety Testing"

  Peiyan Zhang, Haibo Jin, Liying Kang, Haohan Wang. 2024
- "Guard: Role-playing to generate natural-language jailbreakings to test guideline adherence of large language models"
  Haibo Jin, Ruoxi Chen, **Peiyan Zhang,** Andy Zhou, Yang Zhang, Haohan Wang. 2023.

Journal Papers

* indicates equal contribution

- "Advancing Session-Based Recommendations with Atten-Mixer+: Dynamic and Adaptive Multi-Level Intent Mining"
  Juyong Jiang*, **Peiyan Zhang***, Yingtao Luo, Chaozhuo Li, Jae Boum Kim, Kai Zhang, Senzhang Wang, Sunghun Kim, Philip S. Yu.
  IEEE Transactions on Knowledge and Data Engineering (**TKDE**)**,** 2025.
- "Improving Sequential Recommendations via Bidirectional Temporal Data Augmentation With Pre-Training"
  Peiyan Zhang, Jiayan Guo, Chaozhuo Li, Liying Kang, Jaeboum Kim, Jie Xu, Xi Zhang, Yan Zhang, Haohan Wang, Sunghun Kim.
  ACM Transactions on Intelligent Systems and Technology (**TIST**), 2024.

Conference Papers

* indicates equal contribution

- "Revolve: Optimizing AI Systems by Tracking Response Evolution in Textual Optimization"
  Peiyan Zhang, Haibo Jin, Leyang Hu, Xinnuo Li, Liying Kang, Man Luo, Yangqiu Song, Haohan Wang.
  International Conference on Machine Learning (**ICML**), 2025.
- "Foundation Model-oriented Robustness: Robust Image Model Evaluation with Pretrained Models"
  Peiyan Zhang, Haoyang Liu, Chaozhuo Li, Xing Xie, Sunghun Kim, Haohan Wang.
  International Conference on Learning Representations (**ICLR**), 2024.
- "GPT4Rec: Graph Prompt Tuning for Streaming Recommendation"

  Peiyan Zhang, Yuchen Yan, Chaozhuo Li, Liying Kang, Xi Zhang, Feiran Huang, Senzhang Wang, Sunghun Kim.
  International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2024. **[Oral]**
- "TransGNN: Harnessing the Collaborative Power of Transformer and Graph Neural Network for Recommender Systems"

  Peiyan Zhang, Yuchen Yan, Chaozhuo Li, Xi Zhang, Senzhang Wang, Feiran Huang,Xing Xie, Sunghun Kim.

International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2024. **[Oral]**

- "High-Frequency-aware Hierarchical Contrastive Selective Coding for Representation Learning on Text Attributed Graphs"
  Peiyan Zhang, Chaozhuo Li, Liying Kang, Feiran Huang, Senzhang Wang, Xing Xie, Sunghun Kim.
  International World Wide Web Conference (**WWW**), 2024. **[Oral]**
- "Inductive Graph Alignment Prompt: Bridging the Gap between Graph Pre-training and Inductive Fine-tuning From Spectral Perspective"
  Yuchen Yan*****, **Peiyan Zhang***, Zheng Fang, QingQing Long.
  International World Wide Web Conference (**WWW**), 2024. **[Oral]**
- "A Comprehensive Study on Text-attributed Graphs: Benchmarking and Rethinking"
  J Hao Yan, Chaozhuo Li, Ruosong Long, Chao Yan, Jianan Zhao, Wenwen Zhuang, Jun Yin, **Peiyan Zhang**, Weihao Han, Hao Sun, Weiwei Deng, Qi Zhang, Lichao Sun, Xing Xie, Senzhang Wang.
  Advance in Neural Information Processing Systems (**NeurIPS**), 2023.
- "AdaMCT: Adaptive Mixture of CNN-Transformer for Sequential Recommendation"
  Juyong Jiang*****, **Peiyan Zhang***, Yingtao Luo, Chaozhuo Li, Jaeboum Kim, Kai Zhang, Senzhang Wang, Xing Xie and Sunghun Kim.
  International Conference on Information and Knowledge Management **(CIKM***), 2023.* **[Oral]**
- "Continual Learning on Dynamic Graphs via Parameter Isolation"
  Peiyan Zhang*, Yuchen Yan*****, Chaozhuo Li, Senzhang Wang, Xing Xie, Guojie Song, Sunghun Kim.
  International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2023. **[Oral]**
- "Efficiently Leveraging Multi-level User Intent for Session-based Recommendation via Atten Mixer Network"
  Peiyan Zhang*, Jiayan Guo*****, Chaozhuo Li, Yueqi Xie, Jaeboum Kim, Yan Zhang, Xing Xie, Haohan Wang, Sunghun Kim.
  International Conference on Web Search and Data Mining (**WSDM**), 2023.
  [Best Paper Honorable Mention (**Top 2%**) **& Oral]**
- "Evolutionary Preference Learning via Graph Nested GRU ODE for Session-based Recommendation "
  Jiayan Guo*****, **Peiyan Zhang***, Chaozhuo Li, Xing Xie, Yan Zhang, Sunghun Kim.
  International Conference on Information and Knowledge Management (**CIKM**), 2022. **[Oral]**

Teaching Experience

- **Teaching Assistant**
  - COMP3111 Software Engineering at HKUST — Fall 2022
  - COMP4901U Computer Language Processing at HKUST — Fall 2021
  - COMP1021 Introduction to Computer Science at HKUST — Spring 2021

Services

Program Committee Member

- WSDM 2025
- SIGIR 2025
- AAAI 2025
- WWW 2024 Data-centric Artificial Intelligence Workshop
- KDD 2024 Ethical Artificial Intelligence Workshop

Reviewer

- Conference: NeurIPS, ICLR, ICML, KDD, WWW, SIGIR, CVPR, ACL, EMNLP, AAAI, IJCAI, PAKDD, AISTAT
- Journal: IEEE Transactions on Neural Networks and Learning Systems, Neurocomputing, Neural Networks, Information Fusion, Neural Computing & Applications, Future Generation Computer Systems, Computers in Biology and Medicine