

Research Interests

Explainable Recommendation, Recommender Systems, Travel Planning, Large Language Models

Education

Ph.D. of Computer Science

Hong Kong Baptist University (HKBU)

Advisor: [Prof. Li Chen](#), Mentors: [Dr. Yongfeng Zhang](#) & [Dr. Ruihai Dong](#)

Aug. 2017 – Jul. 2022

- Thesis: *Natural Language Explanation for Recommendations and Beyond*
- Studied recurrent neural networks (RNN), Transformer and large language models (LLM) for recommendation explanation generation, and published 3 papers at CIKM'20, ACL'21 and TOIS
- Major research outcome integrated into a small eco-system [NLG4RS](#) for recommender systems-based natural language generation that includes benchmark datasets, evaluation metrics and representative models

B.Eng. of Computer Science & B.Sc. of Mathematics

Shenzhen University (SZU)

Advisor: [Prof. Weike Pan](#)

Sep. 2013 – Jun. 2017

- Research on recommendation algorithms, especially collaborative filtering and matrix factorization

Experiences

Hong Kong Baptist University

Aug. 2022 – Present

Post-doctoral Research Fellow Advisor: [Prof. Li Chen](#), Mentor: [Dr. Yongfeng Zhang](#)

Hong Kong, China

- Supported by Hong Kong Research Grants Council (RGC) and Huawei
- Research on LLM-based recommendation and travel planning with LLM
- Published a survey at COLING'24, where how LLM would shape recommender systems from multi-stage filtering to single-stage filtering was discussed

Rutgers University

Feb. 2023 – Jun. 2023

Visiting Researcher Advisor: [Dr. Yongfeng Zhang](#)

New Brunswick, USA

- Published 1 paper about efficient LLM-based recommendation at CIKM'23

Inspir.ai

Jun. 2019 – Aug. 2019

Intern Mentor: [Dr. Peng Peng](#)

Beijing, China

- Research on explaining the decision-making process of reinforcement learning (RL) agents
- Visualization of the replay data of the computer game StarCraft II

Hong Kong Baptist University

Mar. 2017 – Jun. 2017

Research Exchange Student Advisor: [Prof. Li Chen](#)

Hong Kong, China

- Research on personality for recommender systems

Suishou Technology

Aug. 2016 – Nov. 2016

Intern Advisor: [Prof. Weike Pan](#)

Shenzhen, China

- Utilized machine learning tools (such as Liblinear and XGBoost) to mine potential customers for personalized advertising
- Increased the company's sales of financial products by 4 times during an online test

Selected Publications

- Large Language Models for Generative Recommendation: A Survey and Visionary Discussions
Lei Li, Yongfeng Zhang, Dugang Liu, Li Chen
COLING'24: Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation, pages 10146-10159, Turin, Italy, May 20–25, 2024
- Prompt Distillation for Efficient LLM-based Recommendation
Lei Li, Yongfeng Zhang, Li Chen
CIKM'23: Proceedings of the 32nd ACM International Conference on Information and Knowledge Management, pages 1348-1357, Birmingham, United Kingdom, October 21–25, 2023
- Personalized Prompt Learning for Explainable Recommendation
Lei Li, Yongfeng Zhang, Li Chen
TOIS: ACM Transactions on Information Systems, volume 41 (4), article 103, pages 1-26, March 2023
- On the Relationship between Explanation and Recommendation: Learning to Rank Explanations for Improved Performance
Lei Li, Yongfeng Zhang, Li Chen
TIST: ACM Transactions on Intelligent Systems and Technology, volume 14 (2), article 21, pages 1-24, February 2023
- Improving Personalized Explanation Generation through Visualization
Shijie Geng, Zuohui Fu, Yingqiang Ge, **Lei Li**, Gerard de Melo, Yongfeng Zhang
ACL'22: Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics, pages 244-255, Dublin, Ireland, May 22–27, 2022
- Personalized Transformer for Explainable Recommendation
Lei Li, Yongfeng Zhang, Li Chen
ACL'21 (oral): Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing, pages 4947-4957, Online, Thailand, August 1–6, 2021
- EXTRA: Explanation Ranking Datasets for Explainable Recommendation
Lei Li, Yongfeng Zhang, Li Chen
SIGIR'21: Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval, pages 2463-2469, Virtual Event, Canada, July 11–15, 2021
- Generate Neural Template Explanations for Recommendation
Lei Li, Yongfeng Zhang, Li Chen
CIKM'20: Proceedings of the 29th ACM International Conference on Information & Knowledge Management, pages 755-764, Virtual Event, Ireland, October 19–23, 2020
- Towards Controllable Explanation Generation for Recommender Systems via Neural Template
Lei Li, Li Chen, Yongfeng Zhang
WWW'20 Demo: Companion Proceedings of the Web Conference 2020, pages 198-202, Taipei, Taiwan, April 20–24, 2020

Grants

Huawei Gift Fund

Jun. 2024 – Jun. 2025

Incremental Learning of Large Language Models for Recommendation and Its Applications

HK\$330K

RGC Postdoctoral Fellowship Scheme (PDFS)

Aug. 2022 – Present

Causal Inference for Natural Language Processing in Recommender Systems

Talks

Recent Trends in Recommender Systems Community (RecSys 2024) <i>Professors' Insights Gained from Top Conferences</i>	Nov. 2024 Huawei (Online)
Large Language Models for Generative Recommendation <i>ConsumerBG AI Workshop Hong Kong</i>	Apr. 2024 Huawei Hong Kong Research Center
Large Language Models for Generative Recommendation <i>Huawei Computing Youth Forum</i>	Apr. 2024 Hangzhou
Large Language Models for Recommendation <i>Tutorial at RecSys'23</i> Attracted hundreds of audience	Sep. 2023 Singapore
Generating Recommendation Explanations with Transformer and Pre-trained Model <i>Data Science Lab</i>	Mar. 2023 Korea Advanced Institute of Science & Technology (Online)
Improving Personalized Explanation Generation through Visualization <i>Department of Computer Science</i>	Dec. 2022 University of Luxembourg (Online)
How to Come up with Ideas and Do Research: Experience Sharing <i>COMP7160 Research Methods in Computer Science</i>	Oct. 2021 Hong Kong Baptist University

Academic Services

- **Guest Editor:** ACM Transactions on Recommender Systems (TORS) special issue on “Large Language Models for Recommender Systems”, 2023
- **Workshop Organizer:** “EARL: Workshop on Evaluating and Applying Recommendation Systems with Large Language Models”. RecSys'24
- **Session Chair:** CIKM'23 (Recommendation 9), WWW'23 (Multi-behavior Recommendation & Self-supervised Learning)
- **Program Committee Member:** RecSys'24, WWW'23, RecSys'22
- **Invited Reviewer:**
 - IEEE Transactions on Knowledge and Data Engineering (TKDE), 2023, 2024
 - ACM Transactions on Information Systems (TOIS), 2020, 2022, 2024
 - ACM Transactions on Recommender Systems (TORS), 2023, 2024
 - IEEE Transactions on Big Data (TBD), 2022
 - International Journal of Human-Computer Studies (IJHCS), 2024
 - ACM Transactions on Interactive Intelligent Systems (TiiS), 2021
 - Neurocomputing (NEUCOM), 2018, 2024
 - Knowledge-based Systems (KNOSYS), 2018
 - Journal of Intelligent Information Systems (JIIS), 2021
- **External Reviewer:** CIKM'24, SIGIR'21, WWW'21, WWW'19
- **Student Volunteer:** EMNLP'19

Awards & Honors

RPg Performance Award	HKBU	Sep. 2021
Research Postgraduate Studentship	HKBU	Aug. 2017 – Aug. 2021
Student Travel Grant (Virtual)	SIGIR’21	Jul. 2021
Research Excellence Award	PG Day, HKBU	Jun. 2021
Student Travel Grant (Virtual)	CIKM’20	Oct. 2020
Best Presentation Award	PG Day, HKBU	Jun. 2020
Excellent Teaching Assistant Performance Award	HKBU	Jun. 2018, 2019, 2020
Teaching Assistant Performance Award	HKBU	Feb. 2020
Outstanding Graduate	SZU	Jun. 2017

Technical Skills

Programming Language	Python, Java, Matlab, C++ (ordered by proficiency)
Platform and Tool	PyTorch, TensorFlow, Scikit-learn, MongoDB, Django, XGBoost, Liblinear

Languages

Mandarin	Native
English	Working proficiency
Cantonese	Elementary

Last update: November 29, 2024