

Research Interests

Explainable Recommendation, Recommender Systems, Large Language Models, Natural Language Processing

Education

Ph.D. of Computer Science

Hong Kong Baptist University (HKBU)

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

August 2017 – July 2022

Thesis: *Natural Language Explanation for Recommendations and Beyond*

Studied recurrent neural networks (RNN), Transformer, large language models (LLM) for natural language explanation generation for recommender systems, 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, which includes benchmark datasets, evaluation metrics and representative models

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

Shenzhen University (SZU)

Advisor: [Prof. Weike Pan](#)

September 2013 – June 2017

Research on recommendation algorithms, especially collaborative filtering and matrix factorization

Experience

Hong Kong Baptist University

August 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)
- Research on large language models (LLM)-based recommendation
- Published a survey at COLING'24, where how LLM would shape recommender systems from multi-stage filtering to single-stage filtering is discussed

Rutgers University

February 2023 – June 2023

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

New Brunswick, USA

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

Inspir.ai

June 2019 – August 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

March 2017 – June 2017

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

Hong Kong, China

- Research on personality for recommender systems

Suishou Technology

August 2016 – November 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

- Large Language Models for Generative Recommendation: A Survey and Visionary Discussions
Lei Li, Yongfeng Zhang, Dugang Liu, Li Chen
COLING'24: 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
- Augmenting Legal Judgment Prediction with Contrastive Case Relations
Dugang Liu, Weihao Du, **Lei Li**, Weike Pan, Zhong Ming
COLING'22: Proceedings of the 29th International Conference on Computational Linguistics, pages 2658-2667, Gyeongju, Republic of Korea, October 12–17, 2022
- 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

- Causal Inference for Natural Language Processing in Recommender Systems
Awarded RGC Postdoctoral Fellowship Scheme (PDFS) in 2022
- Research on Generating Explainable Serendipity-Oriented Recommendations based on Knowledge Graph
Partly involved Principal Investigator: [Prof. Li Chen](#)
Funded by General Research Fund (GRF) in 2020
- Engaging the Audience with AI-powered News Chatbot
Partly involved Principal Investigator: [Prof. Li Chen](#)
Funded by HKBU IRCMS Project in 2019

Talk & Tutorial

Large Language Models for Generative Recommendation	April 2024
ConsumerBG AI Workshop Hong Kong	Huawei Hong Kong Research Center
Large Language Models for Generative Recommendation	April 2024
COMP4135 & COMP7240 Recommender Systems	Hong Kong Baptist University
Large Language Models for Generative Recommendation	April 2024
Huawei Computing Youth Forum	Hangzhou
Large Language Models for Recommendation	September 2023
Tutorial at RecSys'23	Singapore
Attracted hundreds of audience	
Generating Recommendation Explanations with Transformer and Pre-trained Model	April 2023
COMP4135 & COMP7240 Recommender Systems	Hong Kong Baptist University (Online)
Generating Recommendation Explanations with Transformer and Pre-trained Model	March 2023
Data Science Lab	Korea Advanced Institute of Science & Technology (Online)
Improving Personalized Explanation Generation through Visualization	December 2022
Department of Computer Science	University of Luxembourg (Online)
How to Come up with Ideas and Do Research: Experience Sharing	October 2021
COMP7160 Research Methods in Computer Science	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
 - IEEE Transactions on Big Data (TBD), 2022
 - 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:** SIGIR'21, WWW'21, WWW'19
- **Student Volunteer:** EMNLP'19

Awards & Honors

RGC Postdoctoral Fellowship Scheme	Hong Kong RGC	<i>August 2022 – Present</i>
RPg Performance Award	HKBU	<i>September 2021</i>
Research Postgraduate Studentship	HKBU	<i>August 2017 – August 2021</i>
Student Travel Grant (Virtual)	SIGIR'21	<i>July 2021</i>
Research Excellence Award	PG Day, HKBU	<i>June 2021</i>
Student Travel Grant (Virtual)	CIKM'20	<i>October 2020</i>
Best Presentation Award	PG Day, HKBU	<i>June 2020</i>
Excellent Teaching Assistant Performance Award	HKBU	<i>June 2018, 2019, 2020</i>
Teaching Assistant Performance Award	HKBU	<i>February 2020</i>
Outstanding Graduate	SZU	<i>June 2017</i>

Technical Skill

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

Language

Mandarin	Native
English	Working proficiency
Cantonese	Elementary

Last update: May 27, 2024