Lei Li 李磊

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✈ RESEARCH INTERESTS

Explainable Recommendation, Recommender Systems, Pre-trained Models, Natural Language Processing

🎓 EDUCATION

Hong Kong Baptist University (HKBU), Hong Kong, China   Aug. 2017 – Jul. 2022

Ph.D. in Computer Science
Thesis: *Natural Language Explanation for Recommendations and Beyond*

Shenzhen University (SZU), Shenzhen, China   Sep. 2013 – Jun. 2017

B.Eng. in Computer Science & *B.Sc.* in Mathematics

👥 EXPERIENCES

Department of Computer Science (CSD), HKBU, Hong Kong, China   Aug. 2022 – Present

Post-doctoral Research Fellow   Advisor: Prof. Li Chen, Mentor: Dr. Yongfeng Zhang

- Research on large language models as recommender systems
- *Output*: published 1 paper on *LLM-based Recommendation* at CIKM'23

Department of Computer Science, Rutgers University, New Brunswick, USA   Feb. 2023 – Jun. 2023

Visiting Researcher   Advisor: Dr. Yongfeng Zhang

Department of Computer Science, HKBU, Hong Kong, China   Aug. 2017 – Jul. 2022

Ph.D. Student   Advisor: Prof. Li Chen, Mentors: Dr. Yongfeng Zhang & Dr. Ruihai Dong

- Research on explainable recommendation
- *Output*:
  • Published 4 papers on *Natural Language Explanation Generation* at WWW'20 Demo & CIKM'20 & ACL'21 & TOIS
  • Published 2 papers on *Explanation Ranking* at SIGIR'21 & TIST
  • Published 1 co-author paper on *Visual Explanation Generation* at ACL'22
  • Published 1 co-author paper on *User Survey on Explanation* at Frontiers in Big Data
  • Published 1 co-author paper on *Legal Judgment Prediction* at COLING'22
  • Published 1 co-author paper on *Unexpected Recommendation* at WISE'22
  • Published 1 paper on *Context-aware Explanation* at JIIS
  • Published 1 paper on *Context-aware Recommendation* at ICDE'19 Workshop

Inspir.ai, Beijing, China   Jun. 2019 – Aug. 2019

Intern   Mentor: Dr. Peng Peng

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

Big Data Institute, SZU, Shenzhen, China   Jul. 2016 – Aug. 2017

Undergraduate Research Assistant   Advisor: Prof. Weike Pan

- Research on recommendation algorithms, especially collaborative filtering and matrix factorization
- *Output*: published 1 paper on *Recommendation Algorithm* at ICWS'18

Department of Computer Science, HKBU, Hong Kong, China   Mar. 2017 – Jun. 2017

Research Exchange Student   Advisor: Prof. Li Chen

- Research on personality for recommender systems

Suishou Technology, Shenzhen, China   Aug. 2016 – Nov. 2016

Intern   Advisor: Prof. Weike Pan

- Utilize machine learning tools (Liblinear and XGBoost) to mine potential customers for personalized advertising
- *Output*: increased the company's revenue on financial products by 4 times

🗊 PUBLICATIONS

- **Lei Li**, Yongfeng Zhang, Li Chen. Prompt Distillation for Efficient LLM-based Recommendation. Proceedings of the 32nd ACM International Conference on Information & Knowledge Management (**CIKM'23**), pages *-*, Birmingham, United Kingdom, October 21–25, 2023.
- **Lei Li**, Yongfeng Zhang, Li Chen. Personalized Prompt Learning for Explainable Recommendation. ACM Transactions on Information Systems (**TOIS**), volume 41 (4), article 103, pages 1-26, March 2023.
- **Lei Li**, Yongfeng Zhang, Li Chen. On the Relationship between Explanation and Recommendation: Learning to Rank Explanations for Improved Performance. ACM Transactions on Intelligent Systems and Technology (**TIST**), volume 14 (2), article 21, pages 1-24, February 2023.
- Yongxin Ni, Ningxia Wang✉, Li Chen, Rui Chen, **Lei Li**. TUR: Utilizing Temporal Information to Make Unexpected E-commerce Recommendations. 23rd International Conference on Web Information Systems Engineering (**WISE'22**), pages 553-563, Biarritz, France, November 1–3, 2022.
- Dugang Liu, Weihao Du, **Lei Li**, Weike Pan✉, Zhong Ming✉. Augmenting Legal Judgment Prediction with Contrastive Case Relations. Proceedings of the 29th International Conference on Computational Linguistics (**COLING'22**), pages 2658-2667, Gyeongju, Republic of Korea, October 12–17, 2022.
- Shijie Geng, Zuohui Fu, Yingqiang Ge, **Lei Li**, Gerard de Melo, Yongfeng Zhang. Improving Personalized Explanation Generation through Visualization. Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (**ACL'22**), pages 244-255, Dublin, Ireland, May 22–27, 2022.
- Zhirun Zhang✉, Li Chen, Tonglin Jiang✉, Yutong Li, **Lei Li**. Effects of Feature-based Explanation and Its Output Modality on User Satisfaction with Service Recommender Systems. Frontiers in Big Data, volume 5, article 897381, pages 1-17, May 2022.
- **Lei Li**, Yongfeng Zhang, Li Chen. Personalized Transformer for Explainable Recommendation. Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (**ACL'21**), pages 4947-4957, Online, Thailand, August 1–6, 2021. (**oral paper**)
- **Lei Li**, Li Chen, Ruihai Dong. CAESAR: Context-Aware Explanation based on Supervised Attention for Service Recommendations. Journal of Intelligent Information Systems (**JIIS**), volume 57 (1), pages 147-170, August 2021.
- **Lei Li**, Yongfeng Zhang, Li Chen. EXTRA: Explanation Ranking Datasets for Explainable Recommendation. Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR'21**), pages 2463-2469, Virtual Event, Canada, July 11–15, 2021.
- **Lei Li**, Yongfeng Zhang, Li Chen. Generate Neural Template Explanations for Recommendation. Proceedings of the 29th ACM International Conference on Information & Knowledge Management (**CIKM'20**), pages 755-764, Virtual Event, Ireland, October 19–23, 2020.
- **Lei Li**, Li Chen, Yongfeng Zhang. Towards Controllable Explanation Generation for Recommender Systems via Neural Template. Companion Proceedings of the Web Conference 2020 (**WWW'20 Demo**), pages 198-202, Taipei, Taiwan, April 20–24, 2020.
- **Lei Li**, Ruihai Dong, Li Chen. Context-aware Co-Attention Neural Network for Service Recommendations. 2019 IEEE 35th International Conference on Data Engineering Workshops (**ICDE'19 Workshop**), pages 201-208, Macao, China, April 8–12, 2019.
- **Lei Li**, Weike Pan✉, Li Chen, Zhong Ming✉. RLT: Residual-Loop Training in Collaborative Filtering for Combining Factorization and Global-Local Neighborhood. 25th International Conference on Web Services (**ICWS'18**), pages 326-336, Seattle, USA, June 25–30, 2018.

✉ denotes corresponding author.

✎ Research Proposal (Or Partly)

- 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
  - Principal Investigator: Prof. Li Chen
  - Funded by General Research Fund (GRF) in 2020
- Engaging the Audience with AI-powered News Chatbot
  - Principal Investigator: Prof. Li Chen
  - Funded by HKBU IRCMS Project in 2019

🎙 Talks & Tutorial

- Tutorial on Large Language Models for Recommendation   Sep. 2023
  - RecSys'23
- Generating Recommendation Explanations with Transformer and Pre-trained Model   Apr. 14, 2023
  - COMP4135 & COMP7240 Recommender Systems, CSD, HKBU (Online)
  - Invited by Prof. Li Chen
- Generating Recommendation Explanations with Transformer and Pre-trained Model   Mar. 3, 2023
  - Data Science Lab, Korea Advanced Institute of Science & Technology (Online)
  - Invited by Dr. Husnu Baris Baydargil & Wenchao Dong
- Improving Personalized Explanation Generation through Visualization   Dec. 8, 2022
  - Department of Computer Science, University of Luxembourg (Online)
  - Invited by Dr. Bereket A. Yilma
- How to Come up with Ideas and Do Research: Experience Sharing   Oct. 19, 2021
  - COMP7160 Research Methods in Computer Science, CSD, HKBU
  - Invited by Prof. Li Chen

💬 Academic Services

- *Topic Coordinator*: Frontiers in Big Data special issue "Natural Language Processing for Recommender Systems"
- *Session Chair*: WWW'23 (Multi-behavior Recommendation & Self-supervised Learning)
- *Program Committee Member*: WWW'23, RecSys'22, SocInfo'22, SAC'22, SAC'21, HITLAML'23
- *Reviewer*:
  - IEEE Transactions on Knowledge and Data Engineering (TKDE)
  - ACM Transactions on Information Systems (TOIS)
  - IEEE Transactions on Big Data (TBD)
  - ACM Transactions on Interactive Intelligent Systems (TiiS)
  - Neurocomputing (NEUCOM)
  - Knowledge-based Systems (KNOSYS)
  - Journal of Intelligent Information Systems (JIIS)
  - Frontiers in Big Data
- *External Reviewer*: User Modeling and User-Adapted Interaction (UMUAI), SIGIR'21, WWW'21, WWW'19, ImpactRS'20, CARS'19
- *Student Volunteer*: EMNLP'19

🏆 Awards & Honors

- *RGC Postdoctoral Fellowship Scheme (PDFS)*, RGC, Hong Kong   Aug. 2022 – Present
- *RPg Performance Award*, CSD, HKBU   Sep. 2021
- *Research Postgraduate Studentship*, HKBU   Aug. 2017 – Aug. 2021
- *Student Travel Grant (Virtual)*, SIGIR'21   Jul. 2021
- *Research Excellence Award*, Postgraduate Research Symposium (PG Day), CSD, HKBU   Jun. 2021
- *Student Travel Grant (Virtual)*, CIKM'20   Oct. 2020
- *Best Presentation Award*, Postgraduate Research Symposium (PG Day), CSD, HKBU   Jun. 2020

- *Excellent Teaching Assistant Performance Award*, CSD, HKBU   Jun. 2018 & 2019 & 2020
- *Teaching Assistant Performance Award*, CSD, HKBU   Feb. 2020
- *Outstanding Graduate*, SZU   Jun. 2017
- *Excellent Student of Academic Performance (2nd Prize)*, SZU   Oct. 2016
- *Excellent Student Leader (2nd Prize)*, SZU   Oct. 2015
- *Song Shan Hu Scholarship*, SZU   Oct. 2014
- *National Motivational Scholarship*, SZU   Oct. 2014

⚙ IT Skills

- Programming language: Python, Java, Matlab, C++ (ordered by proficiency)

- Platform and tools: Linux, PyTorch, TensorFlow, LATEX, Scikit-learn, MongoDB, Django, XGBoost, Liblinear, Git

ℹ Miscellaneous

- Language: Mandarin (native), English (fluent), Cantonese (elementary)

- Google Scholar: citations (260+), h-index (7), h10-index (6)

- Github: stars (300+)

Last update: August 18, 2023