

LEI LI 李磊

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📍 RM625C, David C. Lam Building, 34 Renfrew Road, Kowloon Tong, Hong Kong, China

🔪 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 pre-trained language models as recommender systems

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 1 co-author paper on *Unexpected Recommendation* at WISE'22
- Published 1 co-author paper on *Legal Judgment Prediction* at COLING'22
- 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 2 papers on *Explanation Ranking* at SIGIR'21 & TIST
- Published 4 papers on *Natural Language Explanation Generation* at WWW'20 Demo & CIKM'20 & ACL'21 & TOIS
- 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. 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 (**JGIS**), 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.

PROPOSAL WRITING (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

- 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

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| • <i>Outstanding Graduate</i> , SZU | Jun. 2017 |
| • <i>Excellent Student of Academic Performance (2nd Prize)</i> , SZU | Oct. 2016 |
| • <i>Excellent Student Leader (2nd Prize)</i> , SZU | Oct. 2015 |
| • <i>Song Shan Hu Scholarship</i> , SZU | Oct. 2014 |
| • <i>National Motivational Scholarship</i> , SZU | Oct. 2014 |

⚙ IT SKILLS

- Programming language: Python, Java, Matlab, C++ (ordered by proficiency)
- Platform and tools: Linux, PyTorch, TensorFlow, L^AT_EX, Scikit-learn, MongoDB, Django, XGBoost, Lib-linear, Git

📖 MISCELLANEOUS

- Language: Mandarin (native), English (fluent), Cantonese (elementary)
- Google Scholar: citations (220+), h-index (7), h10-index (6)
- Github: stars (300+)

Last update: July 1, 2023