# SHIJUN LI

0086-17718159958 • lishijun@mail.ustc.edu.cn • Google Scholar • GitHub • Homepage

#### **EDUCATION**

University of Texas at Austin, Austin, U.S.

08/2023 - Present

PhD student in Electrical and Computer Engineering, Cockrell School of Engineering

University of Science and Technology of China, Hefei, China

09/2020 - 07/2023

Master in Electronic and Information Engineering, School of Information Science and Technology

University of Science and Technology of China, Hefei, China

09/2016 - 07/2020

B.E. in Automation, School of Information Science and Technology

### **PUBLICATIONS**

- Shijun Li, Wenqiang Lei, Qingyun Wu, Xiangnan He, Peng Jiang & Tat-Seng Chua, "Seamlessly Unifying Attributes and Items: Conversational Recommendation for Cold-Start Users", in ACM Transactions on Information Systems (TOIS 2021), [pdf] [codes]
- Chongming Gao\*, Shijun Li\*, Wenqiang Lei, Jiawei Chen, Biao Li, Peng Jiang, Xiangnan He, Jiaxin Mao & Tat-Seng Chua, "KuaiRec: A Fully-observed Dataset and Insights for Evaluating Recommender Systems", (\* Equal contribution), in Proceedings of the 31st ACM International Conference on Information and Knowledge Management (CIKM 2022, Full), [pdf] [codes] [data] [presentation]
- Chongming Gao\*, **Shijun Li**\*, Yuan Zhang\*, Jiawei Chen, Biao Li, Wenqiang Lei, Peng Jiang & Xiangnan He, "KuaiRand: An Unbiased Sequential Recommendation Dataset with Randomly Exposed Videos", (\* **Equal contribution**), in Proceedings of the 31st ACM International Conference on Information and Knowledge Management (**CIKM 2022**, Short), [pdf] [data] [poster]
- Chongming Gao, Shiqi Wang, **Shijun Li**, Jiawei Chen, Xiangnan He, Wenqiang Lei, Biao Li, Yuan Zhang & Peng Jiang, "CIRS: Bursting Filter Bubbles by Counterfactual Interactive Recommender System", in ACM Transactions on Information Systems (**TOIS 2023**), [pdf] [codes]

# SELECTED PROJECTS & RESEARCH

**Project**: Explore Interest of Cold-Start Users by Conversational Recommendation 03/2020

03/2020 - 12/2020

Advisor: Prof. Xiangnan He(USTC), Prof. Wenqiang Lei(SCU), Prof. Qingyun Wu(PSU), Prof. Tat-Seng Chua(NUS)

- · Actively asking users' preferences by conversations helps to efficiently capture the interest of cold-start users
- Propose a holistic framework to seamlessly solve all conversation policy questions in an end-to-end manner
- Apply Thompson Sampling to conversational recommendation for keeping EE balance in cold-start scenario

**Project**: Explore Trustworthy Evaluation for Conversational Recommendation

03/2021 - 12/2021

Advisor: Prof. Xiangnan He (USTC), Prof. Wenqiang Lei (SCU), Dr. Peng Jiang (Kuaishou Inc.)

- Collect a fully-observed dataset for the first time on Kuaishou, which is one of the largest short-video sharing Apps in China, with millions of user-item sequential interactions
- Study the effect of different exposure rates and various biases on the evaluation of conversational recommendation systems (CRSs)
- Investigate the effect of matrix completion, i.e. estimating the missing values, on the evaluation of CRSs

**Project**: Implement Reinfocement Learning in Real-World Recommender System

03/2022 - 07/2022

**Advisor:** Prof. Xiangnan He (USTC), Dr. Yuan Zhang (Kuaishou Inc.)

- Design an actor-critic based RL model for online recommendation for millions of users on Kuaishou
- Train the model in an offline RL manner by building and interacting with the world model
- Implement the RL model for the re-ranking task in real-world recommendation application, achieving significant improvement in users' total watch time and diversity of recommended videos

**Project**: Burst Filter Bubbles by Counterfactual Interactive Recommender System

12/2021 - 07/2022

Advisor: Prof. Xiangnan He (USTC), Prof. Jiawei Chen (ZJU), Prof. Wenqiang Lei (SCU)

- Analyze filter bubbles in interactive recommendation, focusing on the overexposure effect on user satisfaction
- Integrate causal inference into offline reinforcement learning to burst filter bubbles

# Kuaishou Technology Co., Ltd.

Beijing, China

Research Intern, Advisor: Prof. Xiangnan He, Dr. Yuan Zhang

03/2020 - 05/2023

- Study the cold-start scenario and trustworthy evaluation of conversational recommendation, constructing two valuable datasets and accomplishing three papers
- Implement offline RL in real-world short video recommendation system, serving millions of people and achieving significant online improvement

# University of Florida, SmartData Lab

Florida, U.S.

Summer Research Intern, Advisor: Prof. Joel B. Harley

07/2019 - 08/2019

- Study the growth and boundaries of grains in microstructure in a RL framework, defining corresponding state and action space in RL
- Process and decode the pictures of microstructure into low-dimension expression, while denoising for the vagueness and noises in these pictures

## PROFESSIONAL SERVICES & AWARDS

- PC Member for the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2022), the 15th International Conference on Web Search and Data Mining (WSDM 2022), and the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2023).
- Invited Reviewer for ACM Transactions on Information Systems (TOIS), ACM Transactions on the Web (TWEB), and ACM International World Wide Web Conference 2022 (WWW 2022)

• UT Austin Engineering Fellowship,	UT Austin, U.S.
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2023

• Illinois Distinguished Fellowship, UIUC, U.S. (declined)

2023

• Outstanding Graduate Scholarship, USTC, China

2023

• National Scholarship, Ministry of Education of China, China (for top 2% students)

2022

• First Class Academic Scholarship, USTC, China

2020 & 2021 & 2022

• Outstanding Student Scholarship, USTC, China

2017 & 2018 & 2019

#### SKILLS

- **Programming Languages:** Python, C, C++, Matlab (ranked by proficiency)
- Tools and Frameworks: PyTorch, Tensorflow, MySQL, Git, LaTeX, Docker, Hadoop
- English: TOEFL: 108 (R: 28; L: 29; S: 26; W: 25); GRE: 321+3.5 (V: 153; Q:168; AW: 3.5)

# TEACHING & SERVICE

- **Teaching Assistant** of two courses ("Fundamentals of Operation Research" and "Function of Complex Variable")
- Administrator of thirteen deep-learning workstations (86 GPUs in total) of LDS lab for three years