Shijun Li

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Education

University of Science and Technology of China, Hefei, China 09/2016 – 06/2020

B.Eng. in Automation, School of Information Science and Technology, GPA: 3.58/4, Rank: Top 20%

University of Science and Technology of China, Hefei, China 09/2020 – 06/2023 (expected)

Master in Electronic and Information Engineering, 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, Biao Li, Peng Jiang, Jiawei Chen, Xiangnan He, Jiaxin Mao & Tat-Seng Chua, "KuaiRec: A Fully-observed Dataset for Recommender Systems", (* Equal contribution), **arXiv preprint**, [pdf] [codes] [data]
- Chongming Gao, Wenqiang Lei, Jiawei Chen, Shiqi Wang, Xiangnan He, **Shijun Li**, Biao Li, Yuan Zhang & Peng Jiang, "CIRS: Bursting Filter Bubbles by Counterfactual Interactive Recommender System", **arXiv preprint** (sbumitted to TOIS), [pdf] [codes]

Selected Projects & Research

Project: Explore Interest of Cold-Start Users by Conversational Recommendation 03/2020 - 12/2020

Advisor: Prof. Xiangnan He (USTC), Prof. Wenqiang Lei (SCU), Prof. Qingyun Wu (PSU)

- Actively asking users' preference by conversations can help 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 from the social video-sharing mobile App, Kuaishou, with millions of user-item sequential interactions
- Study the effect of different exposure rate 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 Recommendation 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 of short videos on Kuaishou App
- Train the model in an offline RL manner by building and interacting with a user simulator
- Implement the RL model for re-ranking task in real-world recommendation application, achieving significant improvement on 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

Experience

Kuaishou Inc. Beijing, China

Research Intern, Advisor: Prof. Xiangnan He, Dr. Yuan Zhang 03/2020 – Now

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

University of Florida, SmartData Lab Gainesville, Florida

Summer Research Intern, Advisor: Prof. Harley Joel.B 07/2019 – 09/2019

- Study the growth and boundaries of grains in microstructure in 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 of these pictures

Professional Services & Awards

- **PC Member** for The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2022**) and The 15th International Conference on Web Search and Data Mining (**WSDM 2022**)
- **Invited Reviewer** for ACM Transactions on Information Systems (**TOIS**) and ACM International World Wide Web Conference (**WWW 2022**)
- First Class Academic Scholarship, USTC, China 2020 & 2021
- 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
Services: Administrator of 11 deep-learning workstations of LDS lab for two years
Teaching assistant of two courses (”Fundamentals of Operation Research” and ”Function of Complex Variable”)