

Shuai Zhang

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🌐 <https://shuaizhang.tech/>

Final year Ph.D student at University of New South Wales working on recommender systems, knowledge graph and deep learning, applying for research fellow.

Education

University of New South Wales

Ph.D. in Computer Science and Engineering

Advisor: Lina Yao, Liming Zhu and Xiwei (Sherry) Xu

Sydney, Australia

Oct. 2016 - present

Nanjing University

B.E. in Information Management and Information System

Advisor: Prof. Shiyao Ou

Nanjing, China

Sep. 2010 - Jun. 2014

Work Experience

Amazon Web Service AI Lab

Research Intern

- Deep learning based recommender systems.

Shanghai

Summer, 2019

TENCENT

Research Intern

- Research on news video recommendation with reinforcement learning.

Beijing

Winter, 2018

OPPO

Software Engineer

- Developing Android applications and widgets.

Shenzhen

Jul. 2014 - Jun. 2016

Research Projects

Opensource Project: DeepRec

<https://github.com/cheungdaven/DeepRec>

- A library for deep learning based recommendation algorithms with Tensorflow.

#stars = 580

Ongoing

Recommendation for RAIZ INVEST

Student Assistant

- Investigating on recommending raiz partners to customers.

2018 - 2019

Journal Publications

1. *Unraveling Metric Vector Spaces with Factorization for Recommendation (major revision)*
Shuai Zhang, Lina Yao, Bin Wu, Xiwei Xu, Xiang Zhang, Liming Zhu.
IEEE Transactions on Industrial Informatics, 2019
2. *Deep Learning based Recommender System: A Survey and New Perspectives*
Shuai Zhang, Lina Yao, Aixin Sun, Yi Tay.
ACM Computing Surveys, 2019
3. *Thing-of-Interest Recommendation in the Internet of Things: Requirements, Challenges and Directions*
Lina Yao, Xianzhi Wang, Quan Z. Sheng, Schahram Dustdar, **Shuai Zhang**.
IEEE Internet Computing, 2019
4. *Internet of Things Meets Brain-Computer Interface: A Unified Deep Learning Framework for Enabling Human-Thing Cognitive Interactivity*
Xiang Zhang, Lina Yao, **Shuai Zhang**, Salil S. Kanhere, Quan Z. Sheng, Yunhao Liu.
IEEE Internet of Things Journal, 2018
5. *Rating Prediction via Generative Convolutional Neural Networks based Regression*
Xiaodong Ning, Lina Yao, Xianzhi Wang, Boualem Benatallah, Manqing Dong, **Shuai Zhang**.
Pattern Recognition Letters, 2018

Conference, Demo, Workshop Publications

6. *Quaternion Knowledge Graph Embedding (preprint)*
Shuai Zhang*, Yi Tay*, Lina Yao, Qi Liu. (*: Equal Contribution)
Submitted to NeurIPS, 2019.
7. *DeepRec: An Open-Source Toolkit for Deep Learning based Recommendation (Demo)*
Shuai Zhang, Yi Tay, Lina Yao, Bin Wu, Aixin Sun.
The 28th International Joint Conference on Artificial Intelligence (IJCAI), 2019. Macau, China.
8. *Lightweight and Efficient Neural Natural Language Processing with Quaternion Networks*
Yi Tay, Aston Zhang, Anh Tuan Luu, Jinfeng Rao, **Shuai Zhang**, Shuohang Wang, Jie Fu and Siu Cheung Hui.
The 57th Annual Meeting of the Association for Computational Linguistics (ACL), 2019. Florence, Italy.
9. *Quaternion Collaborative Filtering for Recommendation*
Shuai Zhang, Lina Yao, Lucas Vinh Tran, Aston Zhang, Yi Tay.
The 28th International Joint Conference on Artificial Intelligence (IJCAI), 2019. Macau, China.
10. *Next Item Recommendation with Self-Attentive Metric Learning (Workshop)*
Shuai Zhang, Yi Tay, Lina Yao, Aixin Sun, Jake An.
AAAI 2019 workshop, Recommender Systems Meet Natural Language Processing
11. *Holographic Factorization Machines for Recommendation*
Yi Tay *, **Shuai Zhang ***, Anh Tuan Luu, Siu Cheung Hui, Lina Yao, Vinh Tran. (*: Equal Contribution)
The 33rd AAAI Conference on Artificial Intelligence (AAAI), 2019. Honolulu, United States.
12. *NeuRec: On Nonlinear Transformation for Personalized Ranking*
Shuai Zhang, Lina Yao, Aixin Sun, Sen Wang, Guodong Long, Manqing Dong.
The 27th International Joint Conference on Artificial Intelligence (IJCAI), 2018. Stockholm, Sweden.
13. *Coupled Linear and Deep Nonlinear Method for Meetup Service Recommendation*
Shuai Zhang, Lina Yao, Xiaodong Ning, Chaoran Huang, Xiwei Xu, Shiyao Ou.
The 16th International Conference on Web Services (ICWS), 2018. Seattle, United States.
14. *Data-Augmented Regression with Generative Convolutional Network*
Xiaodong Ning, Lina Yao, Xianzhi Wang, Boualem Benatallah, **Shuai Zhang**.
The 19th International Conference on Web Information Systems Engineering (WISE), 2018. Dubai, United Arab Emirates.
15. *Expert Recommendation via Tensor Factorization with Regularizing Hierarchical Topical Relationships*
Chaoran Huang, Xianzhi Wang, Lina Yao, Boualem Benatallah, **Shuai Zhang**, Manqing Dong.
The 16th International Conference on Service Oriented Computing (ICSOC), 2018. Hanzhou, China.
16. *AutoSVD++: An Efficient Hybrid Collaborative Filtering Model via Contractive Auto-encoders*
Shuai Zhang, Lina Yao, Xiwei Xu.
The 40th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2017. Tokyo, Japan.
17. *Hybrid Collaborative Recommendation via Semi-AutoEncoder*
Shuai Zhang, Lina Yao, Xiwei Xu, Sen Wang, Liming Zhu.
The 24th International Conference On Neural Information Processing (ICONIP), 2017. Guangzhou, China.

Book Chapters

18. *Deep Neural Networks meet Recommender Systems*
Shuai Zhang, Lina Yao, Aixin Sun, Guibing Guo, Xiwei Xu, Liming Zhu.
Big Data Recommender Systems: Recent Trends and Advances, Institution of Engineering and Technology

Professional Services

- **Program Committee Member** for RSBD (in parallel with ICDE) 2019.
- **Journal Reviewer** for IEEE TKDE, IEEE Access, Neurocomputing, Pattern Recognition Letter, Neural Processing Letters, Multimedia Tools and Applications, Artificial Intelligence Review, PLOS ONE.
- **Conference reviewer** for IJCAI 2019, ECML-PKDD 2019, AAAI 2019, PAKDD 2019, CIKM 2018, IJCAI 2018, ICWS 2017.
- **Conference Volunteer** for AAAI 2019, IJCAI 2019.

Talks

- *Holographic Factorization Machines for Recommendation*
AAAI'19, Honolulu, Jan. 2019.
- *Next Item Recommendation with Self-Attentive Metric Learning*
Northeastern University (shenyang, Dec. 2018) and RecNLP'19 (Honolulu, Jan. 2019).
- *NeuRec: On Nonlinear Transformation for Personalized Ranking*
IJCAI'18, Stockholm, Jul. 2018.
- *Deep Learning for Recommender Systems*
RMIT University, Melbourne. Nov. 2017.

Press Coverage

- **Australia FinTech**: Raiz Invest partners with UNSW to power rewards with machine learning
- **Jiqizhixin**: Deep Learning based Recommender System: A Survey and New Perspectives

Scholarship, Awards and Membership

ACM/IEEE/AAAI Student Membership	2017 - Present
IJCAI 2019 Travel Grant	Jun. 2019
AAAI 2019 Travel Grant	Dec. 2018
UNSW Postgraduate Research Student Support Funds	2018 - 2019
ACM SIGIR 2017 Travel Grant	2017
UNSW Tuition Fee Scholarship, UNSW	2016 - 2020
Data61 Student Scholarship, Data61, CSIRO	2016 - 2020
People Scholarship, Nanjing University	2011,2012,2013
Excellent Student, School of Information Management, Nanjing University	2012

Referees

- **Lina Yao** Senior Lecturer, School of Computer Science and Engineering, The University of New South Wales. Email: lina.yao@unsw.edu.au;
- **Aixin Sun** Associate Professor and Assistant Chair, School of Computer Science and Engineering, Nanyang Technological University. Email: axsun@ntu.edu.sg;
- **Liming Zhu** Research Director, Software Computational Systems, Data61, CSIRO and Conjoint Full Professor of UNSW. Email: Liming.Zhu@data61.csiro.au