Shuai Zhang

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POSITIONS

ETH Zurich, Zurich, Switzerland   *Feb 2020-present*
Postdoctoral Researcher, Department of Computer Science
Supervisor: Professor Ce Zhang

EDUCATION

University of New South Wales, Sydney, Australia   *2016-2019*
Ph.D in Computer Science and Engineering
Supervisor: Professors Lina Yao, Liming Zhu and Sherry Xu
Affiliation: Data61, Commonwealth Scientific and Industrial Research Organisation

Nanjing University, Nanjing, China,   *2010-2014*
Bachelor in Information Management and Information System
Supervisor: Professor Shiyan Ou

WORK EXPERIENCE

Amazon AI, Shanghai, China   *Jul 2019-Jan 2020*
Research Intern in deep learning.
Supervisor: Dr. Aston Zhang
Write the chapter *Recommender Systems* for the book *Dive into Deep Learning*

Tencent, Beijing, China   *Oct 2018-Dec 2018*
Research Intern in recommender systems.

OPPO, Shenzhen, China   *Jul 2014-Jun 2016*
Software Engineer in Android development.

PUBLICATIONS

Conferences Papers

1. *Symmetric Metric Learning with Adaptive Margin for Recommendation.*
   Mingming Li, **Shuai Zhang**, Fuqing Zhu, Liangjun Zang, Wanhui Qian, Jizhong Han, Songlin Hu.
   The 34th AAAI Conference on Artificial Intelligence (**AAAI**), 2020.

2. *HyperML: A Boosting Metric Learning Approach in Hyperbolic Space for Recommender Systems* (**Best Paper Award Runner-Up**).
   Lucas Vinh Tran, Yi Tay, **Shuai Zhang**, Gao Cong, Xiaoli Li.
   The 13th ACM International Conference on Web Search and Data Mining (**WSDM**), 2020.

3. *Quaternion Knowledge Graph Embeddings.*
   Shuai Zhang, Yi Tay, Lina Yao, Qi Liu.
   Thirty-third Conference on Neural Information Processing Systems (**NeurIPS**), 2019.

4. *DeepRec:An Open-Source Toolkit for Deep Learning based Recommendation.*
   Shuai Zhang, Yi Tay, Lina Yao, Bin Wu, Aixin Sun.
   The 28th International Joint Conference on Artificial Intelligence (**IJCAI Demo**), 2019.

5. *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.

6. *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.

7. *Next Item Recommendation with Self-Attentive Metric Learning.*
   Shuai Zhang, Yi Tay, Lina Yao, Aixin Sun, Jake An.
   Recommender Systems Meet Natural Language Processing **(AAAI workshop)**, 2019.

8. *Holographic Factorization Machines for Recommendation.*
   Yi Tay, **Shuai Zhang**, Anh Tuan Luu, Siu Cheung Hui, Lina Yao, Vinh Tran.
   The 33rd AAAI Conference on Artificial Intelligence **(AAAI)**, 2019.

9. *Adaptive Cognitive Activity Recognition with Reinforced Attentive CNN.*
   Xiang Zhang, Lina Yao, Xianzhi Wang, Wenjie Zhang, **Shuai Zhang**, and Yunhao Liu..
   The 19th IEEE International Conference on Data Mining **(ICDM)**, 2019.

10. *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.

11. *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.

Journal Papers

12. *Unraveling Metric Vector Spaces with Factorization for Recommendation*
    Shuai Zhang, Lina Yao, Bin Wu, Xiwei Xu, Xiang Zhang, Liming Zhu.
    IEEE Transactions on Industrial Informatics **(TII)**, 2019

13. *Deep Learning based Recommender System: A Survey and New Perspectives*
    Shuai Zhang, Lina Yao, Aixin Sun, Yi Tay.
    ACM Computing Surveys **(CSUR)**, 2019

14. *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 **(IC)**, 2019

15. *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 **(IoT Journal)**, 2018

16. *Rating Prediction via Generative Convolutional Neural Networks based Regression*
    Xiaodong Ning, Lina Yao, Xianzhi Wang, Boualem Benatallah, Manqing Dong, **Shuai Zhang**.
    Pattern Recognition Letters **(PRL)**, 2018

Book Chapters

17. *Deep Neural Networks meet Recommender Systems*
    Shuai Zhang, Lina Yao, Aixin Sun, Guibing Guo, Xiwei Xu, Liming Zhu.
    Book Title: *Big Data Recommender Systems: Recent Trends and Advances*
    Book Authors/Editors: Osman Khalid, Samee U. Khan, and Albert Y. Zomaya.
    Press: Institution of Engineering and Technology

18. *Recommender Systems (to appear)*
    Shuai Zhang, Aston Zhang, Lina Yao.
    Book Title: *Handbook of Machine Learning for Data Science*, (Third Edition of the book *Data Mining and Knowledge Discovery Handbook*).
    Book Authors/Editors: Maimon, Oded, Lior Rokach and Moshe Klein.
    Press: Springer.

19. *Recommender Systems (Link)*
    Shuai Zhang, Aston Zhang, Yi Tay.
    Book Title: *Dive into Deep Learning*

Book Authors/Editors: Aston Zhang, Zack C. Lipton, Mu Li and Alex J. Smola.

Awards & HONORS

WSDM Best Paper Award Runner-Up	*2020*
NeurIPS Travel Grant	*2019*
IJCAI Travel Grant	*2019*
AAAI Travel Grant	*2019*
UNSW Postgraduate Research Student Support Funds	*2018-2019*
ACM SIGIR Travel Grant	*2017*
UNSW Tuition Fee Scholarship	*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*

Projects

Open-source Project: DeepRec *2016-2019*
Creator, #stars > 700
A library for deep learning based recommendatiom algorithms with Tensorflow.

Open-source Book: Dive into Deep Learning *2019*
Contributor, #stars > 3000
Dive into Deep Learning by Aston Zhang, Zack C. Lipton, Mu Li and Alex J. Smola.

TEACHING & SUPERVISION

Teaching Assistant *2019*
Product Analytics of UNSW Business School, by Professor Jun Bum Kwon.

Students Advisor *2018*
Xiaocong Chen, honors student of UNSW
Thesis: Multi-contextual Collaborative Recommendation.

SERVICES

Program Committee Member

International ACM SIGIR Conference Demo track	*2020*
Annual Conference of the Association for Computational Linguistics	*2020*
ICDE'19 Workshop on Recommender Systems with Big Data	*2019*

Invited Journal Reviewer
Knowledge-based Systems
IEEE Transactions on Mobile Computing
ACM Transactions of Information Systems
IEEE Intelligent Systems
IEEE Transactions on Knowledge and Data Engineering
IEEE Access
Pattern Recognition Letters
Engineering Applications of Artificial Intelligence
Neurocomputing
Multimedia Tools and Applications
PLOS ONE
ACM computing surveys
IEEE Journal of Biomedical and Health Informatics

External Reviewer
IJCAI 2019, ECML-PKDD 2019, AAAI 2019, PAKDD 2019, Artificial Intelligence Review, CIKM 2018, IJCAI 2018, ICWS 2017.

Conference Volunteer

AAAI 2019, IJCAI 2019.

TALKS

Personalized Recommendation: Neural Architectures and Beyond
Nanjing University, Nanjing, Dec. 2019.

Quaternion Collaborative Filtering for Recommendation
IJCAI'19, Macau, Aug. 2019.

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.

REFERENCES **UPON REQUEST**