

# Shuai Zhang

F69, ETH Cab  
Zurich, Switzerland  
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Webpage : <https://shuaizhang.tech>  
Github : [github.com/cheungdaven](https://github.com/cheungdaven)  
+41-779607545

POSITIONS	ETH Zurich, Zurich, Switzerland Postdoctoral Researcher, Department of Computer Science Supervisor: Professor Ce Zhang	Feb 2020-present
EDUCATION	University of New South Wales, Sydney, Australia 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, Bachelor in Information Management and Information System Supervisor: Professor Shiyan Ou	2016-2019  2010-2014
WORK EXPERIENCE	Amazon AI, Shanghai, China Research Intern in deep learning. Mentor: Dr. Aston Zhang Write the chapter <i>Recommender Systems</i> for the book <i>Dive into Deep Learning</i>  Tencent, Beijing, China Research Intern in recommender systems.  OPPO, Shenzhen, China Software Engineer in Android development.	Jul 2019-Jan 2020  Oct 2018-Dec 2018  Jul 2014-Jun 2016
PUBLICATIONS	<b>Conferences Papers</b> <ol style="list-style-type: none"><li><i>HyperML: A Boosting Metric Learning Approach in Hyperbolic Space for Recommender Systems (Best Paper Award Runner-Up).</i> Lucas Vinh Tran, Yi Tay, <b>Shuai Zhang</b>, Gao Cong, Xiaoli Li. The ACM International Conference on Web Search and Data Mining (<b>WSDM</b>), 2020.</li><li><i>Symmetric Metric Learning with Adaptive Margin for Recommendation.</i> Mingming Li, <b>Shuai Zhang</b>, Fuqing Zhu, Liangjun Zang, Wanhui Qian, Jizhong Han, Songlin Hu. The 34th AAAI Conference on Artificial Intelligence (<b>AAAI</b>), 2020.</li><li><i>Quaternion Knowledge Graph Embeddings.</i> <b>Shuai Zhang</b>, Yi Tay, Lina Yao, Qi Liu. Thirty-third Conference on Neural Information Processing Systems (<b>NeurIPS</b>), 2019.</li><li><i>DeepRec: An Open-Source Toolkit for Deep Learning based Recommendation.</i> <b>Shuai Zhang</b>, Yi Tay, Lina Yao, Bin Wu, Aixin Sun. The 28th International Joint Conference on Artificial Intelligence (<b>IJCAI Demo</b>), 2019.</li><li><i>Quaternion Collaborative Filtering for Recommendation.</i> <b>Shuai Zhang</b>, Lina Yao, Lucas Vinh Tran, Aston Zhang, Yi Tay. The 28th International Joint Conference on Artificial Intelligence (<b>IJCAI</b>), 2019.</li><li><i>Lightweight and Efficient Neural Natural Language Processing with Quaternion Networks.</i> Yi Tay, Aston Zhang, Anh Tuan Luu, Jinfeng Rao, <b>Shuai Zhang</b>, Shuohang Wang, Jie Fu and Siu Cheung Hui. The 57th Annual Meeting of the Association for Computational Linguistics (<b>ACL</b>), 2019.</li></ol>	

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*

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	<b>Open-source Project: DeepRec</b>	2016-2019
	Creator, #stars > 700	
	A library for deep learning based recommendation algorithms with Tensorflow.	
	<b>Open-source Book: Dive into Deep Learning</b>	2019
	Contributor, #stars > 3000	
	Dive into Deep Learning by Aston Zhang, Zack C. Lipton, Mu Li and Alex J. Smola.	
TEACHING & SUPERVISION	<b>Teaching Assistant</b>	2019
	Product Analytics of UNSW Business School, by Professor Jun Bum Kwon.	
	<b>Students Advisor</b>	2018
	Xiaocong Chen, honors student of UNSW	
	Thesis: Multi-contextual Collaborative Recommendation.	
SERVICES	<b>Program Committee Member</b>	
	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
	<b>Invited Journal Reviewer</b>	
	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	
	<b>External Reviewer</b>	
	IJCAI 2019, ECML-PKDD 2019, AAAI 2019, PAKDD 2019, Artificial Intelligence Review, CIKM 2018, IJCAI 2018, ICWS 2017.	
	<b>Conference Volunteer</b>	

AAAI 2019, IJCAI 2019.

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## 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.

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## REFERENCES UPON REQUEST