

## 1 CONTACT DETAILS

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## 2 EDUCATION

**Ph.D.** in Computer Science, Jan 2013–Aug 2017  
University of Melbourne, Australia  
Research: contextual recommendation, spatial-temporal data management

**B.E.** in Computer Science, Sept 2008–Jun 2012  
Renmin University of China, China  
Graduated with honors

## 3 WORKING AND VISITING EXPERIENCES

**Software Engineer (Machine Learning)** at **Twitter**, Jun 2017–Present  
Search, Twitter, United States  
Working on search relevance and information quality of search and recommendation  
Developing full-stack search engine with huge real-time and spiking traffic

**Research Intern** at **Google**, Feb 2017–Apr 2017  
Research & Machine Intelligence, Google, United States  
Worked on email category prediction for ads recommendation and Google Now  
Developed embedding methods for email templates and annotations

**Visiting Fellow** at **MSRA**, Apr 2015–Feb 2016  
Social Computing Group, Microsoft Research Asia, China  
Worked on contextual user behavior modeling for personal assistants, e.g., Cortana, Siri  
Collaborated with product teams and developed proactive experience inference models

**Project Officer** at **NTU**, July 2012–Jan 2013  
School of Computer Engineering, Nanyang Technological University, Singapore  
Worked on shortest path authentication methods and graph partitioning on road-networks  
Also worked on low-sampling rate spatial trajectory mining and completion

**Research Assistant** at **RUC**, May 2011–June 2012

Department of Computer Science, Renmin University of China, China  
Worked on knowledge-base and semi-structure data management  
Developed retrieval models for web entity search and XML faceted search

#### 4 PUBLICATIONS

- [1] Chuandong Yin, Rui Zhang, Jianzhong Qi, **Yu Sun**, and Tengyun Tan. Context uncertainty aware chatbot action selection via parameterized auxiliary reinforcement learning. In *Proceedings of the 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2018.
- [2] Xiaojie Wang, Jianzhong Qi, Kotagiri Ramamohanarao, **Yu Sun**, Bo Li, and Rui Zhang. A joint optimization approach for personalized recommendation diversification. In *Proceedings of the 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2018.
- [3] Yingzi Wang, Nicholas Jing Yuan, **Yu Sun**, Chuan Qin, and Xing Xie. App download forecasting: An evolutionary hierarchical competition approach. In *Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI)*, pages 2978–2984, 2017.
- [4] **Yu Sun**, Nicholas Jing Yuan, Xing Xie, Kieran McDonald, and Rui Zhang. Collaborative intent prediction with real-time contextual data. *ACM Transactions on Information Systems (TOIS)*, 35(4):30:1–30:33, August 2017.
- [5] **Yu Sun**, Nicholas Jing Yuan, Yingzi Wang, Xing Xie, Kieran McDonald, and Rui Zhang. Contextual intent tracking for personal assistants. In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, pages 273–282, 2016 (**Best Student Paper Award**).
- [6] **Yu Sun**, Rui Zhang, Andy Yuan Xue, Jianzhong Qi, and Xiaoyong Du. Reverse nearest neighbor heat maps: A tool for influence exploration. In *32nd IEEE International Conference on Data Engineering (ICDE)*, pages 966–977, 2016.
- [7] **Yu Sun**, Nicholas Jing Yuan, Xing Xie, Kieran McDonald, and Rui Zhang. Collaborative nowcasting for contextual recommendation. In *Proceedings of the 25th International World Wide Web Conference (WWW)*, pages 1407–1418, 2016.
- [8] Yingzi Wang, Nicholas Jing Yuan, **Yu Sun**, Fuzheng Zhang, Xing Xie, Qi Liu, and Enhong Chen. A contextual collaborative approach for app usage forecasting. In *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*, pages 1247–1258, 2016.
- [9] **Yu Sun**, Jianzhong Qi, Yu Zheng, and Rui Zhang. K-nearest neighbor temporal aggregate queries. In *Proceedings of the 18th International Conference on Extending Database Technology (EDBT)*, pages 493–504, 2015.
- [10] **Yu Sun**, Jianzhong Qi, Rui Zhang, Yueguo Chen, and Xiaoyong Du. Mapreduce based location selection algorithm for utility maximization with capacity constraints. *Computing*, 97(4):403–423, 2015.

- [11] **Yu Sun**, Jin Huang, Yueguo Chen, Rui Zhang, and Xiaoyong Du. Location selection for utility maximization with capacity constraints. In *21st ACM International Conference on Information and Knowledge Management (CIKM)*, pages 2154–2158, 2012.
- [12] **Yu Sun**, Jin Huang, Yueguo Chen, Xiaoyong Du, and Rui Zhang. Top-k most incremental location selection with capacity constraint. In *Web-Age Information Management - 13th International Conference (WAIM)*, pages 165–171, 2012.
- [13] Qiuyue Wang, Yantao Gan, and **Yu Sun**. RUC @ INEX 2011 data-centric track. In *Focused Retrieval of Content and Structure, 10th International Workshop of the Initiative for the Evaluation of XML Retrieval (INEX)*, pages 167–179, 2011.

## 5 SELECTED PRIZES AND AWARDS

Victoria University Research Impact Award, Semi Finalist, Victorian Young Achiever Awards 2017  
 Best Student Paper Award (Applied Data Science), The 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'16) 2016  
 International Postgraduate Research Scholarship (IPRS) of Australia (approximately one prize winner per year in the department) 2013-2016  
 Australian Postgraduate Award 2013-2016  
 KDD/ICDE/WWW Student Travel Award 2016  
 Google PhD Travel Scholarships 2015 2016  
 Melbourne Abroad Traveling Scholarship 2015 2016  
 Outstanding Graduate Award of School of Information, Renmin University of China 2012  
 Honorable Mention Prize of North American Mathematical Modeling Contest 2011  
 Third Prize of National Mathematical Competition (Beijing Professional Group) 2010  
 First Price of National Motivational Scholarship of China 2009

## 6 TEACHING EXPERIENCES

**Head Teaching Assistant**, Semester One 2016

Advanced Database Systems, University of Melbourne, Australia

**Lab Demonstrator**, Semester One 2016

Programming and Software Development, University of Melbourne, Australia

**Head Teaching Assistant**, Semester Two 2014

Algorithms and Complexity, University of Melbourne, Australia

**Teaching Assistant**, Semester One 2014

Algorithms and Complexity, University of Melbourne, Australia

**Marking Assistant**, Semester Two 2013

Algorithms and Complexity, University of Melbourne, Australia

**Teaching Assistant**, Semester Fall 2011

Programming Practice, Renmin University of China, China

## 7 SYSTEM DEVELOPMENT PROJECT

### **FuelPriceShare Android App** Jan 2015–Apr 2015

Led the development of an app that recommends gas stations  
Designed the system logic, infrastructure, and user interface  
Implemented several spatial queries and crowdsourcing methods  
Wrote both server-side and mobile-side code with Java

## 8 INVITED TALKS

**2016** School of Computer Science and Information Technology, RMIT, Australia

## 9 PROFESSIONAL SERVICES

**Reviewer (external)** WWW 2017, AAAI 2017, UbiComp 2016, IEEE/ACM ASONAM 2016, KDD 2016, IJCAI 2016, WWW 2016, SDM 2016, MDM 2016, WAIM 2016, SIGMOD 2015, SSTD 2015, ApWeb 2015, UrbComp 2015, CCF Big Data 2015, DASFAA 2013

**Journal Reviewer** Transactions on Knowledge and Data Engineering, Pervasive and Mobile Computing, Transactions on Intelligent Systems and Technology, Journal of Systems and Software, International Journal of Knowledge Management