

Xiaoying Zhang

Ph.D. Candidate, Expecting to Graduate in Mid-2019

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Education

- 2015–current **Ph.D., Computer Science and Engineering, The Chinese University of Hong Kong.**
- Research interests: Large-scale user behavior modeling, covering recommender system, fraud detection;
 - Advisor: Prof. John C.S. Lui
- 2011–2015 **B.E., Computer Science and Technology, University of Science and Technology of China.**
- Rank: 4/91

Experience

- 2018.05–2018.09 **Research Intern, ByteDance AILab, Beijing.**
- Supervisor: Dr. Hang Li.
 - Research on efficient exploration in contextual bandits via high-level feedback.
 - Using users' interaction data on Toutiao, one of biggest news recommendation platforms in China, designed and conducted experiments to analyze recommendation diversity, and suggested several directions to improve.
- 2014.12–2015.06 **Research Intern, Microsoft Research Asia.**
- Supervisor: Dr. Yunbo Cao
 - Developed a platform to classify emails with travel intent, which are rare, from users' daily email exchanges.
- 2014.09–2014.12 **Research Intern, Microsoft Research Asia.**
- Supervisor: Dr. Bin Gao
 - Improved word embeddings generated by RC-NET with knowledge graph.
- 2014.07–2014.09 **Research Intern, University of Birmingham, England.**
- Supervisor: Professor Xin Yao
 - Software effort estimation via decision tree ensembles.

Research Projects

- Recsys'17
IJCAI'18 **Modeling the Assimilation-Contrast Effects in Online Product Rating Systems: Debiasing and Recommendations (Best Paper Award of Recsys'17)**
- Previous experimental studies showed that the disclosed historical ratings would distort subsequent ratings. However, none of existing work clearly characterizes the historical influence.
 - By analyzing real ratings from Amazon and Tripadvisor, we first revealed the assimilation and contrast effects in user's rating behavior caused by historical ratings.
 - Developed a model to debias the historical distortion.
 - Showed the benefits of the model in better recommendation and wiser consumer decision making.
- ICNP '18 **Sybil Detection in Social-Activity Networks: Modeling, Algorithms and Evaluations.**
- Recent studies showed that an important assumption, on which previous graph-based sybil (fake account) detection methods are built up, are unrealistic. Moreover, breaking down this assumption leads to low detection accuracy.
 - Explore users' activities and bring out a new realistic attack model (The Social-Activity Attack Model).
 - Designed an efficient algorithm under new attack model to detect sybils.
 - Provided theoretical analysis and extensive experimental evaluation.
- Under Preparation **Efficient Exploration via High-level Feedback in News Recommendations**

- Conventional contextual bandit algorithms may converge slowly with even moderately large feature spaces.
- Design a bandit algorithm to explore high-level feedback on suparms to reduce the amount of exploration required.
- Design the optimal suparm selection strategy & provide the performance guarantee.

Publications

Conference

- [1] **Zhang, Xiaoying**, Junzhou Zhao, and John Lui. Modeling the assimilation-contrast effects in online product rating systems: Debiasing and recommendations. In *Proceedings of the Eleventh ACM Conference on Recommender Systems*, pages 98–106. ACM, 2017 (**Best Paper Award**).
- [2] **Zhang, Xiaoying**, Hong Xie, Junzhou Zhao, and John Lui. Modeling the assimilation-contrast effects in online product rating systems: Debiasing and recommendations. In *IJCAI Sister Conference (Best Paper Track)*, 2018.
- [3] **Zhang, Xiaoying**, Hong Xie, and John Lui. Sybil detection in social-activity networks: Modeling, algorithms and evaluations. In *IEEE 26th International Conference on Network Protocols (ICNP)*. IEEE, 2018.

Honors & Awards

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| Scholarships | CUHK Postgraduate Studentship CUHK, 2015 – 2019 |
| | IBM Scholarship, 2014 |
| | "Xing Ye" Scholarship at USTC, 2013 |
| | USTC Outstanding Student Scholarship (first class), 2012 |
| Others | Student Travel Grants for ICNP 2018 |

Skills

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| Languages | Use C/C++ in most projects, familiar with Python, MatLab and Spark |
| Others | Native in Chinese, professional working proficiency in English |