WEIWEN LIU

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Rm 117, SHB, The Chinese University of Hong Kong, Sha Tin, Hong Kong.

EDUCATION

The Chinese University of Hong Kong　　　　　　　　　　　　　　08/2016 - present
Ph.D. in Computer Science and Engineering　　　　　Expected graduation date: 07/2020
Supervisor: Prof. Pheng-Ann Heng, Prof. Shengyu Zhang

South China University of Technology　　　　　　　　　　　　　09/2013 - 07/2016
B.Eng. in Computer Science and Technology
GPA: 3.87/4.0 (rank 2nd in All-English-Teaching Union Class)

RESEARCH INTERESTS

My research interest lies on personalization and recommendation algorithms. Specifically, my main interests include leveraging user behavioral data and feedback to produce recommendation with social goods in terms of accuracy, diversity, serendipity, and fairness. I have been working on various machine learning tools like bandit algorithms, deep reinforcement learning, deep learning, and graph neural networks.

PUBLICATIONS

[C7] Balancing between Accuracy and Fairness for Interactive Recommendation with Reinforcement Learning
Weiwen Liu, Feng Liu, Ruiming Tang, Ben Liao, Guangyong Chen, Pheng-Ann Heng
Proceedings of Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD). Springer, Cham, 2020.

[C6] Adversarial Learning for Overlapping Community Detection and Network Embedding
Junyang Chen, Zhiguo Gong, Quanyu Dai, Chunyuan Yuan, **Weiwen Liu**
Proceedings of 24th European Conference on Artificial Intelligence (ECAI), 2020.

[C5] PMD: An Optimal Transportation-based User Distance for Recommender Systems
Yitong Meng, Xinyan Dai, Xiao Yan, James Cheng, **Weiwen Liu**, Jun Guo, Ben Liao, Guangyong Chen
Proceedings of 42nd European Conference on Information Retrieval (ECIR), 2020.

[C4] Consistency-Aware Recommendation for User-Generated Item List Continuation
Yun He, Yin Zhang, **Weiwen Liu**, James Caverlee
Proceedings of the 13th International Conference on Web Search and Data Mining (WSDM), 2020.

[J3] A Dirichlet Process Biterm-based Mixture Model for Short Text Stream Clustering
Junyang Chen, Zhiguo Gong, **Weiwen Liu**
Applied Intelligence (2020): 1-11.

[C3] Personalized Fairness-aware Re-ranking for Microlending
Weiwen Liu, Jun Guo, Nasim Sonboli, Robin Burke, Shengyu Zhang
Proceedings 13th ACM Conference on Recommender Systems (RecSys). 2019.

[J2] A Nonparametric Model for Online Topic Discovery with Word Embeddings
Junyang Chen, Zhiguo Gong, **Weiwen Liu**
Information Sciences 504 (2019): 32-47.

[C2] Field-aware Probabilistic Embedding Neural Network for CTR Prediction
Weiwen Liu, Ruiming Tang, Jiajin Li, Jinkai Yu, Huifeng Guo, Xiuqiang He, Shengyu Zhang
Proceedings of the 12th ACM Conference on Recommender Systems (RecSys), 2019.

[C1] Contextual Dependent Click Bandit Algorithm for Web Recommendation
Weiwen Liu, Shuai Li, Shengyu Zhang
International Computing and Combinatorics Conference (COCOON), Springer, Cham, 2018.

[J1] Face Liveness Detection Using a Flash Against 2D Spoofing Attack
Patrick PK Chan, **Weiwen Liu**, Danni Chen, Daniel S Yeung, Fei Zhang, Xizhao Wang, Chien-Chang Hsu
IEEE Transactions on Information Forensics and Security 13, no. 2 (2018): 521-534.

EXPERIENCES

Research intern, Huawei Noah's Ark Lab   10/2019 - 01/2020
Working on the problem of designing graph neural networks for personalized re-ranking.

Visiting student, Texas A&M University   07/2019 - 09/2019
Working together with Prof. James Caverlee on the problem of complementary item recommendation with graph neural networks.

Research intern, Tencent Quantum Lab   09/2018 - 12/2018
Working on machine learning algorithms for quantum chemistry.

Visiting student, DePaul University   05/2018 - 08/2018
Working together with Prof. Robin Burke on the problem of the fairness issue in multi-stakeholder recommender systems.

PROFESSIONAL ACTIVITIES

Talks
Talk at Huawei Noah's Ark Lab on *Fairness in Recommender Systems*   01/2020
Talk at SCUT on *Recommendation with Multi-armed Bandit Algorithms*   09/2017

Reviews
Sub-reviewer for IJCAI 2018; Reviewer for TKDE.

AWARDS AND SCHOLARSHIPS

Teaching Assistant Award of Merits   2019

Top 10 Outstanding Students at SCUT (*rank 1st*, highest award for students at SCUT)   2015

Huawei Scholarship   2015

National Scholarship   2014