

Adaptive and Automated Deep Recommender Systems

Date: 26 February 2021 (Friday)

Time: 10am - 11am

Seminar link: <https://cityu.zoom.us/j/96359667179>



ABSTRACT

Deep recommender systems have become increasingly popular in recent years, and have been utilized in a variety of domains, including movies, music, books, search queries, and social networks. They assist users in their information-seeking tasks by suggesting items (products, services, or information) that best fit their needs and preferences. Most existing recommender systems are based on static recommendation policies and hand-crafted architectures. Specifically, (i) most recommender systems consider the recommendation procedure as a static process, which may fail given the dynamic nature of the users' preferences; (ii) existing recommendation policies aim to maximize the immediate reward from users, while completely overlooking their long-term impacts on user experience; (iii) designing architectures manually requires ample expert knowledge, non-trivial time and engineering efforts, while sometimes human error and bias can lead to suboptimal architectures. I will introduce my efforts in tackling these challenges via reinforcement learning (RL) and automated machine learning (AutoML), which can (i) adaptively update the recommendation policies, (ii) optimize the long-term user experience, and (iii) automatically design the deep architectures for recommender systems.



Mr Xiangyu ZHAO GUEST SPEAKER'S PROFILE

Mr Xiangyu Zhao is a Ph.D. candidate of computer science and engineering at Michigan State University (MSU). His supervisor is Dr. Jiliang Tang. Prior to MSU, he completed his MS (2017) at USTC and BS (2014) at UESTC. His current research interests include data mining and machine learning, especially (1) Reinforcement Learning, AutoML, and their applications in Information Retrieval (recommendation, computational advertising and search); (2) Urban Computing and Spatio-Temporal Data Analysis. After joining MSU, he has published more than 20 papers in top conferences (e.g., KDD, WWW, SIGIR, AAAI, ICDE, CIKM, ICDM, WSDM, RecSys) and journals (e.g., SIGKDD, SIGWeb). His research received Criteo Research Award, Bytedance Research Award, and MSU Dissertation Fellowship. He serves as top data science and artificial intelligence conference (senior) program committee members and session chairs (e.g., KDD, AAAI, IJCAI, ICML, ICLR, CIKM), and journal reviewers (e.g., TKDE, TKDD, TOIS). He serves as the organizers of DRL4KDD@KDD'19, DRL4IR@SIGIR'20, DRL4KD@WWW'21, and a lead tutor at WWW'21. Please find more information at <http://www.cse.msu.edu/~zhaoxi35>