Xuan **Kan**

Ph.D. Candidate
Department of Computer Science
Emory University

Last Updated: Sept 2023
E-mail: xuan.kan@emory.edu
Homepage: kanxuan.live

Research Interests

Ads Ranking, Privacy ML, Graph Machine Learning & Data Mining and **AI for Health**

Education

Emory University, Atlanta, GA, USA Sept 2019 – Present
Ph.D., Department of Computer Science
Emory Graph Mining Lab
Advisor: Prof. Carl J. Yang
GPA: 3.97/4.0

Tongji University, Shanghai, CHINA Sept 2014 – Jul 2018
B.E., School of Software Engineering
Advisor: Prof. Lin Zhang
GPA: 4.55/5.0

Experiences

Meta, Seattle, WA, USA June 2023 – Sept 2023
PhD Software Engineer Intern @ Ads Core ML: Privacy
Designed and Built the new Mobile App Install model for App Ads Signal Loss Problem.
Mentor: Shupeng Gui

Google, Remote Oct 2022 – June 2023
Student Researcher @ Google Federated Assistant Team
Employed privacy-preserving machine learning (federated learning) and parameter-efficient transfer learning to solve the massive data requirement of ASR models and the substantial communication cost between servers and clients.
Mentor: Yonghui Xiao, Tien-Ju Yang

Meta, Seattle, WA, USA May 2022 – Aug 2022
PhD Software Engineer Intern @ Ads Core ML: Privacy
Worked on building Multi-Task Multi-Label (MTML) Hypergraph Neural Network (HGNN) for Signal Loss Problem.
Mentor: Shupeng Gui

Oxford University, Oxford, UK April 2017 – May 2018
Research Intern @ Cyber-Physical Systems Group
Assisted and finished three projects, from face recognition to liquids intake monitor, each publishing a related paper.
Mentor: Chris Xiaoxuan Lu

Selected Publications [Google Scholar]

* indicates equal contribution.

[IEEE BHI 2023] **Dynamic Brain Transformer with Multi-level Attention for Functional Brain Network Analysis**
Xuan Kan, Aodong Chen Gu, Hejie Cui, Carl Yang
*The IEEE-EMBS International Conference on Biomedical and Health Informatics (**IEEE BHI**), 2023*

[KDD 2023] **R-Mixup: Riemannian Mixup for Biological Networks**
Xuan Kan*, Zimu Li*, Hejie Cui, Yue Yu, Ran Xu, Shaojun Yu, Zilong Zhang, Ying Guo, Carl Yang
*ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD**), 2023*

[AAAI 2023] **Neighborhood-regularized Self-Training for Learning with Few Labels**
Ran Xu, Yue Yu, Hejie Cui, **Xuan Kan**, Yanqiao Zhu, Joyce C. Ho, Chao Zhang, Carl Yang

*Proceedings of the AAAI International Conference on Artificial Intelligence (**AAAI**), **Oral**, 2023*

[IEEE TMI]	**BrainGB: A Benchmark for Brain Network Analysis with Graph Neural Networks** Hejie Cui, Wei Dai, Yanqiao Zhu, **Xuan Kan**, Antonio Aodong Chen Gu, Joshua Lukemire, Liang Zhan, Lifang He, Ying Guo, Carl Yang *IEEE Transactions on Medical Imaging (**TMI**), **IF: 11.037**, 2022*
[NeurIPS 2022]	**Brain Network Transformer** **Xuan Kan**, Wei Dai, Hejie Cui, Zilong Zhang, Ying Guo, Carl Yang *Proceedings of the Conference on Neural Information Processing Systems (**NeurIPS**), **Spotlight**, 2022*
[KDD 2022]	**Data-Efficient Brain Connectome Analysis via Multi-Task Meta-Learning** Yi Yang*, Yanqiao Zhu*, Hejie Cui, **Xuan Kan**, Lifang He, Ying Guo, Carl Yang *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD**), 2022*
[MIDL 2022]	**FBNetGen: Task-aware GNN-based fMRI Analysis via Functional Brain Network Generation** **Xuan Kan**, Hejie Cui, Joshua Lukemire, Ying Guo, Carl Yang *International Conference on Medical Imaging with Deep Learning (**MIDL**), **Oral**, 2022*
[ECML 2021]	**Zero-Shot Scene Graph Relation Prediction through Commonsense Knowledge Integration** **Xuan Kan**, Hejie Cui, Carl Yang *The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (**ECML-PKDD**), 2021*
[WWW 2019]	**AutoTune: Autonomous Learning for Face Recognition in the Wild via Ambient Wireless Cues** Xiaoxuan Lu*, **Xuan Kan***, Stefano Rosa, Bowen Du, Hongkai Wen, Andrew Markham, Niki Trigoni. The Web Conference 2019, **WWW**, 2019

Scholarships, Awards, & Honors

IEEE BHI Travel Award	2023
CIKM Virtual Registration Award	2022
Outstanding Graduates of Tongji University, China	2018
National Scholarship, The Ministry of Education of China	2017
Tongji University Programming Competition (Silver Prize)	2017
China Undergraduate Mathematical Contest in Modeling (Second Prize in National Level)	2016
Android Entrepreneurship Student Challenge by Google Inc. (Sliver Prize)	2016
Tongji University Scholarship for Outstanding Students	2015, 2016

Academic Services

Program Committee Member | Reviewer

IEEE Transactions on Knowledge and Data Engineering (**TKDE**)	2023
The Thirty-sixth Conference on Neural Information Processing Systems (**NeurIPS**)	2023
The Web Conference (**WWW**)	2022, 2023
Conference on Artificial Intelligence, Special Track on AI for Social Impact (**AAAI**)	2023
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**SIGKDD**)	2022
SIAM International Conference on Data Mining (**SDM**)	2022
The Conference on Information and Knowledge Management (**CIKM**)	2022
IEEE Transactions on Big Data (**Big Data**)	2021, 2022
IEEE Transactions on Neural Networks and Learning Systems (**TNNIS**)	2022
Interpretable Machine Learning in Healthcare Workshop @ ICML	2021, 2022, 2023
Computer Vision for Automated Medical Diagnosis Workshop @ ICCV	2022

Workshop Organizer

Neural Networks for Brain Connectome Analysis: Theories, Methods, and Applications Workshop @ IEEE BigData   2022

Volunteer

ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**SIGKDD**)   2023
The Conference on Information and Knowledge Management (**CIKM**)   2022
International Conference on Machine Learning (**ICML**)   2021