

Xiaotian Han

Assistant Professor
Case Western Reserve University
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Appointment

Assistant Professor Case Western Reserve University, Cleveland, OH, USA	Aug 2024 – present
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Education

Texas A&M University, College Station, TX, USA Ph.D. in Computer Science	Sep 2019 – Aug 2024
Beijing University of Posts and Telecommunications, Beijing, CHINA M.S. in Computer Science	Sep 2016 – June 2019
Shandong University, Jinan, Shandong, CHINA, B.S. in Information and Communication Engineering	Sep 2011 – June 2015

Awards & Honors

Jane Street Graduate Research Fellowship Award Honorable Mention	2024
Excellent Ph.D. Student Award (One Per Year), Department of CSE, Texas A&M University	2023
NeurIPS 2023 Scholar Award	2023
Grad School Research and Presentation Travel Award, Texas A&M University	2023
ICML2022 Outstanding Paper Award	2022
Best Paper Awards, ADMA2018	2018
Travel Grant, Department of CSE, Texas A&M University	2022, 2023
Travel Award, ICML2022	2022
Outstanding Reviewer Award, ICML2022	2022
Best Reviewer Award, CCF Transactions on Pervasive Computing and Interaction	2019

Publications

* indicates equal contribution

- [1] **TMLR2024**. "On the Equivalence of Graph Convolution and Mixup". Xiaotian Han, Hanqing Zeng, Yu Chen, Shaoliang Nie, Jingzhou Liu, Kanika Narang, Zahra Shakeri, Karthik Abinav Sankararaman, Song Jiang, Madian Khabisa, et al. *Transactions on Machine Learning Research*. 2024.
- [2] **ACL2024**. "PokeMQA: Programmable knowledge editing for Multi-hop Question Answering". Hengrui Gu, Kaixiong Zhou, Xiaotian Han, Ninghao Liu, Ruobing Wang, and Xin Wang. *Annual Meeting of the Association for Computational Linguistics*. 2024.
- [3] **ICML2024**. "Llm maybe longlm: Self-extend llm context window without tuning". Hongye Jin*, Xiaotian Han*, Jingfeng Yang, Zhimeng Jiang, Zirui Liu, Chia-Yuan Chang, Huiyuan Chen, and Xia Hu. *International Conference on Machine Learning*. 2024.
- [4] **ICLR2024**. "FFB: A Fair Fairness Benchmark for In-Processing Group Fairness Methods". Xiaotian Han, Jianfeng Chi, Yu Chen, Qifan Wang, Han Zhao, Na Zou, and Xia Hu. *International Conference on Learning Representations*. 2024.
- [5] **TKDD2024**. "Harnessing the power of llms in practice: A survey on chatgpt and beyond". Jingfeng Yang*, Hongye Jin*, Ruixiang Tang*, Xiaotian Han*, Qizhang Feng*, Haoming Jiang, Shaochen Zhong, Bing Yin, and Xia Hu. *ACM Transactions on Knowledge Discovery from Data*. 2024.
- [6] **NeurIPS2024**. "Chasing Fairness Under Distribution Shift: A Model Weight Perturbation Approach". Zhimeng Stephen Jiang, Xiaotian Han, Hongye Jin, Guanchu Wang, Rui Chen, Na Zou, and Xia Hu. *Advances in Neural Information Processing Systems*. 2024.
- [7] **KDDExp2024**. "Marginal Nodes Matter: Towards Structure Fairness in Graphs". Xiaotian Han, Kaixiong Zhou, Ting-Hsiang Wang, Jundong Li, Fei Wang, and Na Zou. *ACM SIGKDD Explorations Newsletter*. 2024.
- [8] **AMIA2023**. "Does synthetic data generation of llms help clinical text mining?" Ruixiang Tang, Xiaotian Han, Xiaoqian Jiang, and Xia Hu. *AMIA 2024 Annual Symposium*. 2023.
- [9] **ICLR2023**. "MLPinit: Embarrassingly Simple GNN Training Acceleration with MLP Initialization". Xiaotian Han, Tong Zhao, Yozen Liu, Xia Hu, and Neil Shah. *International Conference on Learning Representations*. 2023.

- [10] **TMLR2023**. “Retiring Δ DP: New Distribution-Level Metrics for Demographic Parity”. Xiaotian Han, Zhimeng Jiang, Hongye Jin, Zirui Liu, Na Zou, Qifan Wang, and Xia Hu. *Transactions on Machine Learning Research*. 2023.
- [11] **ICML2022**. “G-Mixup: Graph Data Augmentation for Graph Classification”. Xiaotian Han, Zhimeng Jiang, Ninghao Liu, and Xia Hu. *International Conference on Machine Learning*. 2022. **ICML2022 Outstanding Paper Award**.
- [12] **WWW2022**. “Geometric graph representation learning via maximizing rate reduction”. Xiaotian Han, Zhimeng Jiang, Ninghao Liu, Qingquan Song, Jundong Li, and Xia Hu. *ACM Web Conference*. 2022.
- [13] **KDD2019**. “Metapath-guided Heterogeneous Graph Neural Network for Intent Recommendation”. Shaohua Fan, Junxiong Zhu, Xiaotian Han, Chuan Shi, Linmei Hu, Biyu Ma, and Yongliang Li. *ACM SIGKDD International Conference on Knowledge Discovery & Data Mining*. 2019.
- [14] **ICLR2022**. “Generalized demographic parity for group fairness”. Zhimeng Jiang, Xiaotian Han, Chao Fan, Fan Yang, Ali Mostafavi, and Xia Hu. *International Conference on Learning Representations*. 2022.
- [15] **RecSys2020**. “Autorec: An automated recommender system”. Ting-Hsiang Wang, Xia Hu, Haifeng Jin, Qingquan Song, Xiaotian Han, and Zirui Liu. *ACM Conference on Recommender Systems*. 2020.
- [16] **WWWJ2020**. “Embedding geographic information for anomalous trajectory detection”. Ding Xiao, Li Song, Ruijia Wang, Xiaotian Han, Yanan Cai, and Chuan Shi. *World Wide Web*. 2020.
- [17] **AAAI2020**. “Flowscope: Spotting money laundering based on graphs”. Xiangfeng Li, Shenghua Liu, Zifeng Li, Xiaotian Han, Chuan Shi, Bryan Hooi, He Huang, and Xueqi Cheng. *AAAI conference on artificial intelligence*. 2020.
- [18] **TKDE2019**. “Deep collaborative filtering with multi-aspect information in heterogeneous networks”. Chuan Shi, Xiaotian Han, Li Song, Xiao Wang, Senzhang Wang, Junping Du, and S Yu Philip. *IEEE transactions on knowledge and data engineering*. 2019.
- [19] **IJCAI2018**. “Aspect-level deep collaborative filtering via heterogeneous information networks”. Xiaotian Han, Chuan Shi, Senzhang Wang, Philip S Yu, and Li Song. *International Joint Conference on Artificial Intelligence*. 2018.
- [20] **APWeb2018**. “Representation learning with depth and breadth for recommendation using multi-view data”. Xiaotian Han, Chuan Shi, Lei Zheng, Philip S Yu, Jianxin Li, and Yuanfu Lu. *APWeb-WAIM*. 2018.
- [21] **ADMA2018**. “Anomalous trajectory detection using recurrent neural network”. Li Song, Ruijia Wang, Ding Xiao, Xiaotian Han, Yanan Cai, and Chuan Shi. *Advanced Data Mining and Applications*. 2018.

Teaching

Instructor, Case Western Reserve University CSDS600: Large Language Models	Aug 2024 – Dec 2024
Teaching Assistant, Texas A&M University CSCE629: Analysis of Algorithms, Instructor: Andreas Klappenecker	Jan 2024 – May 2024
Teaching Assistant and Lecturer, Texas A&M University CSCE636: Deep Learning, Instructor: Anxiao Jiang	Aug 2023 – Dec 2023
Online Course Creator and Mentor Online Course: Image Classification with AutoKeras, Manning Publications Co.	Sept 2021 - Nov 2021
Guest lecturer, Rice University COMP 640: Graduate Research Seminar in Machine Learning, Instructor: Xia Hu	Fall 2023

Professional Experiences

Amazon , Palo Alto, CA Applied Scientist Intern, Large Language Model Alignment	May 2023 – Aug 2023
Meta , Menlo Park, CA Research Intern, Understanding graph neural networks	Sept 2022 – April 2023
Snap Research , Seattle, WA Research Intern, Efficient large-scale graph neural networks	May 2022 – Aug 2022
Microsoft Research Asia , Beijing, China Research Intern Hyperparameter search with Bayesian optimization	March 2019 - Jun 2019

Open-Source Contributions

Lite LLaMa: Reduced-Scale, Experimental Versions of LLaMa 2 , Sole Contributor, 10000+ downloads <i>an open-source reproduction of Meta AI's LLaMA and LLaMa 2 with significantly reduced model sizes</i> https://huggingface.co/ahxt/llama2	2023
FFB: Fair Fairness Benchmark , Sole Contributor <i>A PyTorch-based framework for evaluating the fairness of machine learning models.</i> https://github.com/ahxt/fair_fairness_benchmark	2023
LLMs Servery Repo , Main Contributor, 7100+ stars <i>A curated list of practical guide resources of LLMs.</i> https://github.com/Mooler0410/LLMsPracticalGuide	2023
AutoRec: An Automated Recommender System , Main Contributor <i>A Keras-based implementation of automated recommendation algorithms for both rating prediction and Click Through Rate task.</i> https://github.com/datamlab/AutoRec	2020
AutoKeras: An AutoML System Based on Keras , Contributor, 9000+ stars <i>An AutoML system based on Keras with the goal to make machine learning accessible to everyone.</i> https://autokeras.com/	2020

Talks & Presentations

Invited Talks

Graph Learning with Low Resources, VISA Research	2023
Algorithmic Fairness in Finance: Problems, Methods and Benchmarks, MLF@KDD2023	2023
Graph Neural Network Training Acceleration, LOGS	2023
Graph Neural Network Training Acceleration, AI-TIME	2023
Graph Augmentation for Graph Classification, Meta AI	2022
Graph Augmentation for Graph Classification, Wormpex AI Research	2022
Graph Augmentation for Graph Classification, Central South University	2022

Conference Presentations

\mathcal{G} -Mixup: Graph Augmentation for Graph Classification, ICML, Baltimore, MD	2022
Graph Representation Learning via Unsupervised Rate Reduction Maximization, TheWebConf, Online	2022
Aspect-Level Deep Collaborative Filtering via HIN, IJCAI, Stockholm, Sweden	2018

Professional Services

Reviewer ICLR2023,2024; ICML2022,2023,2024; NeurIPS2022,2023,2024; AAAI2021,2022,2023,2024; WWW2023; WSDM2024; CIKM2023; IJCAI2021,2023; EMNLP2023; ICDM2022;

Session Chair WWW2023, ICML2022

Last updated on November 26, 2024