Xiao CHEN

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GitHub Profile
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Research Interest

My current research is about developing **Trustworthy Multimodal Recommenders** that deeply understand human intentions and mitigate potential discriminatory bias in the loop. To enhance their accessibility in edge devices, I also explore **Model Compression and Efficient Inference** algorithms for LLMs and VLMs.

Education

- **The Hong Kong Polytechnic University** *2022-Now*
  Ph.D. candidate in Computer Science Advisor: Chair Professor Qing Li, Professor Zhaoxiang Zhang
- **Zhejiang University** *2017-2020*
  M.Eng. in Computer Science GPA: 3.9/4.0, Rank: 2/35
- **Northwestern Polytechnical University** *2013-2017*
  B.Eng. in Software Engineering GPA: 3.7/4.0, Rank: 2/235
- **University of Texas at Arlington** *2020-2021*
  Research Assistant Advisor: Professor Junzhou Huang

Selected Projects

- **Efficient Multimodal Recommendation via Adaptive Token Compression** *In Progress*
  ***Xiao Chen**, Changyi Ma, Zhaoxiang Zhang, Qing Li*
  – In this project, we develop efficient multimodal recommender systems via scenario-adaptive visual context compression and layer-wise pruning.
- **Cross-layer and Cross-head Distillation for SLM-based Recommendations** *ACL Findings 2025*
  ***Xiao Chen**, Changyi Ma, Wenqi Fan, Zhaoxiang Zhang, Qing Li*
  – In this project, we develop effective knowledge distillation techniques to overcome layer redundancy and prediction head discrepancy, enabling small language models (e.g., Llama3-1B) to achieve recommendation capabilities comparable to larger 7B-parameter LLMs.
- **FIRM: Flexible Interactive Reflection reMoval** *AAAI 2025*
  ***Xiao Chen**, Xudong Jiang, Yunkang Tao, Zhen Lei, Qing Li, Chenyang Lei, Zhaoxiang Zhang*
  – In this project, we build Segment Any Reflection Model (SARM) and curate an open-sourced interactive reflection removal dataset that support point, box, text prompt. We further build a novel contrastive mask-guided reflection removal network, achieving SOTA performance and reducing human annotation time from 150s to 10s
- **Fairly Adaptive Negative Sampling for Recommendations** *WWW 2023*
  ***Xiao Chen**, Wenqi Fan, Jingfan Chen, Haochen Liu, Zitao Liu, Zhaoxiang Zhang, Qing Li*
  – In this project, we revisit the uniform negative sampling method in recommender systems and find that they unwarrantedly discriminate against major item groups. Accordingly, we build a novel adaptive negative sampling method with bi-level optimization, which contributes fair and accurate implicit recommendations
  – Our method inspires several follow-up studies, ICLR'25 (Bridging Jensen Gap for Max-Min Group Fairness Optimization in Recommendation), WWW'24 (Intersectional two-sided fairness in recommendation).
- **A Comprehensive Survey on Trustworthy Recommender Systems** *Arxiv 2023*
  *Wenqi Fan, Xiangyu Zhao, **Xiao Chen**, Jingtong Gao, Qidong Liu, Lei Chen, Qing Li*
  – We present a comprehensive overview of the current research landscape in Trustworthy Recommender Systems, where we study the following key dimensions: Robustness, Fairness, Explainability, Privacy.

Academical Services

Tutorial Speaker: Trustworthy Recommender Systems: Foundations and Frontiers in KDD, WWW, IJCAI 2023
Conference Reviewer: NeurIPS 24-25, ICLR 25, ICML 25, WWW 25, KDD 25, ECCV 24, AAAI 23, AISTATS 25
Journal Reviewer: TOIS, TKDD, TAI

Awards

- **Outstanding Graduate Student in Zhejiang Province** *2020*
- **Merit Student & Excellent Student Cadre in ZJU** *2018,2019*
- **Chiang Chen Scholarship** *2018*
- **National Scholarship** *2016*
- **First Prize in Asian Super Computer Competition** *2016*