QIAO ZHAO

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EDUCATION

Boston University (BU) *Jan. 2026 (Expected)*
M.S. in Artificial Intelligence
GPA: 4.0/4.0
Related courses: Principles of Machine Learning, Introduction to Artificial Intelligence, Introduction to Natural Language Processing

Xiamen University (XMU) *June 2024*
B.E. in Computer Science and Technology
GPA: 3.25/4.0
Related courses: Data Structure, Design and Analysis of Algorithms, Numerical Analysis, Linear Algebra, Calculus
Graduation Thesis: Hypergraph-Enhanced Contrastive Learning in Recommender Systems, Advised by Prof. Chen Lin.

RESEARCH INTERESTS

I am interested in Machine Learning, Natural Language Processing,Information Retrieval, Multimodal Leanring, and Recommendation Systems.

PUBLICATIONS

[1] Y. Li, **Qi'ao Zhao**, C. Lin, J. Su, and Z. Zhang, "Who to align with: Feedback-oriented multi-modal alignment in recommendation systems," in *Proceedings of the 47th International ACM SIGIR Conference on Research and Development in Information Retrieval, SIGIR 2024*, pp. 667–676.

[2] Y. Li, **Qi'ao Zhao**, C. Lin, Z. Zhang, and X. Zhu, "GENET: unleashing the power of side information for recommendation via hypergraph pre-training," To Appear DASFAA 24'. [Online]. Available: https://arxiv.org/abs/2311.13121.

RESEARCH EXPERIENCE

I joined as a Research Assistant and finished my graduation thesis at the Data Mining Group, Xiamen Univesity between 2023 and 2024. I worked with Yang Li and Prof. Chen Lin.

Hypergraph-Enhanced Contrastive Learning in Recommendation 2023 - 2024
Graduation Thesis, Advisor: Prof. Chen Lin XMU

- **Explored** how hypergraph structure and side information can address the issues of ignoring structural semantic relationship between positive-negative pairs, and noisy feedbacks in current contrastive learning based RSs.
- **Proposed** a novel Hypergraph-Enhanced Contrastive Learning framework, termed **HyperAlign** that can be stacked upon any existing recommendation models.
- **Improved** 5 baseline models' performance over 2 datasets by 12.97% on average

Multi-Modal Alignment in Recommendation Systems[1] 2023 - 2024
Supervisors: Yang Li, Prof. Chen Lin XMU

- **Model Design**: Assist in the design and implementation of the proposed method.
- **Model Adaptation**: Modify several baseline models to adapt to our method.
- **Experiment**: Conduct evalutation of baseline models.
- **Visualization**: Produce graphs and charts for the paper

Hypergraph Based Pre-training Model in Recommendation Systems[2] 2023 - 2024
Supervisors: Yang Li, Prof. Chen Lin XMU

- **Data Processing**: Process the Amazon Books Dataset (27M reviews and 2M products) and construct user/item hypergraphs using Numpy, Scikit-Learn, and PyTorch
- **Data Analysis**: Analyze experiment results to support discussion and improvement of our methods, using Numpy, Pandas and Matplotlib.
- **Visualization**: Produce graphs and charts for the paper.

Improving Multimodal Sentiment Analysis With Dynamic Modality Attention 2024
Course Research Project, Instructor: Andrew Wood BU

- **Designed** a novel method evaluates instance-level modality quality thus encourages learning from well-aligned modalities and prevents disturbance from poorly-aligned modalities.