LI, FAN

a213837054@gmail.com

EDUCATION

XI'AN JIAOTONG-LIVERPOOL UNIVERSITY — **SUZHOU, CHINA**

BSc in Information and Computing Science — *Expected graduation: Jun 2025*

- **Overall GPA:** 3.89/4.00
- **Related Coursework:** Artificial Intelligence, Algorithm and Problem Solving, Machine Learning
- **Honors and Awards:** University Academic Excellence Award (Top 5%)

WORK EXPERIENCE

UNIVERSITY OF PITTSBURGH, DEPARTMENT OF COMPUTER SCIENCE — **REMOTE**

Intern — *Oct 2023 – Jan 2024*

- Led a project on multimodal geoscience analysis, utilizing cutting-edge vision language models to predict small-scale river dynamics
- Employed advanced machine learning algorithms for detailed hydrological pattern analysis, enhancing predictive accuracy
- Contributed to the identification and analysis of critical flaws in state-of-the-art Vision Language Models (GPT-3V/GPT-4V), advancing the understanding of hallucination phenomena in machine learning models

HKUST (GUANGZHOU), AI THRUST — **REMOTE**

Intern — *Jan 2024 – Jun 2024*

- Developed a novel Graph Unknown Influential Maximization (GUIM) strategy, employing reinforcement learning with social diffusion models to maximize the influence of social bots in social networks
- Leveraged Distributional Reinforcement Learning (Distributional RL) within a safe reinforcement learning framework to enhance detection and mitigation strategies against high-influence social bots, significantly improving the resilience of digital platforms against such automated threats.

WESTLAKE UNIVERSITY, AI DIVISION — **HANGZHOU, CHINA**

Visiting Students — *Jun 2024 – Now*

- Developed a tool to assist biologists with protein-related tasks by using an agent to process queries and connect them to appropriate AI tools
- Enabled the agent to identify tasks requiring fine-tuning and automate the process to allow non-AI-expert biologists to make adjustments
- Integrated publicly available models into the framework, ensuring flexibility and adaptability in handling various protein-related queries

ACADEMIC EXPERIENCE

A ROBUST DEEP GRAPH CLUSTERING FRAMEWORK VIA DUAL SOFT ASSIGNMENT — **SUZHOU, CHINA**

*Leader; (*The publication is under-reviewed in WSDM 2025)* — *Mar 2024 – May 2024*

- Adopted a robust model called Robust Deep Graph Clustering via Dual Soft Assignment (RDSA) to enhance graph clustering in network analysis
- Enhanced clustering performance, robustness, and scalability by integrating a dual soft assignment approach in RDSA
- Validated RDSA's superior capabilities through comprehensive testing on multiple real-world datasets, illustrating its effectiveness over state-of-the-art methods with detailed visualizations of its robust clustering across various graph types.

COLLABORATIVE FILTERING WITH BAYESIAN APPROACH — **HUNAN, CHINA**

Researcher — *Oct 2023 – Nov 2023*

- Adoptd an innovative CFLS method for cold-start music recommendation, leveraging Variational Auto-Encoder (VAE) integrated with a Gaussian process (GP) prior for collaborative filtering in latent spaces
- Enhanced recommendation accuracy, diversity, and interpretability by incorporating user correlations into the CFLS model
- Validated CFLS's superior performance through rigorous testing on real-world data, complemented by visualizations demonstrating its ability to generate diverse, interpretable, and user-specific recommendations

DUAL PROTOTYPE ATTENTIVE GRAPH NETWORK FOR CROSS-MARKET RECOMMENDATION — **SUZHOU, CHINA**

*Researcher (*The publication is under-reviewed in ESWA)* — *Oct 2023 – Nov 2023*

- Developed the Dual Prototype Attentive Graph Network (DGRE) framework for enhancing cross-market recommendation systems
- Utilized graph-based learning within DGRE to delineate user and item prototypes, capturing both shared and unique behaviors across markets
- Achieved improvement in recommendation performance by leveraging dual prototypes to tailor recommendations to individual market dynamics, showcasing the model's versatility and effectiveness in understanding complex consumer patterns

PERSONALIZED CAUSAL DISENTANGLEMENT FOR DEBIASING RECOMMENDATION — **SUZHOU, CHINA**

Research assistant — *Apr 2023 – Oct 2023*

- Improved recommendations across diverse markets by integrating meta-learning with graph representation learning techniques
- Collaborated on the development of a personalized causal disentanglement model to debias recommendation systems
- Contributed expertise to Collaborative Filtering in Latent Space, employing a Bayesian approach to address the cold-start problems

PUBLICATION

Kong, M.*, Fan, L.* (Equal contribution), Xu, S., Li, X., Hou, M., Cao, C. (May 2024). Collaborative Filtering in Latent Space: A Bayesian Approach for Cold-Start Music Recommendation. (Conducted oral presentation at the 28th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2024))

TECHNICAL SKILLS

Programming languages and Tools: Java, C++, Python (pytorch), C, SQL, Springboot, GIT, Matlab