Yuanchen Bei

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EDUCATION

Zhejiang University, Hangzhou, P.R. China

- M.S. in Computer Technology — Sep 2022 – Mar 2025
  - Now a final-year master's student at the College of Computer Science and Technology.
  - A research assistant student at the graph learning group of Eagle Lab.

Jinan University, Guangzhou, P.R. China

- B.S. in Computer Science and Technology — Sep 2018 – Jun 2022
  - **Graduated with Outstanding Honors, National Scholarship (Top 1%)**.
  - Cumulative GPA: 3.75 / 4.00 (**ranking 1 / 84**).

RESEARCH INTERESTS

- My research interests mainly include graph learning and data mining, with particular emphasis on relation modeling for real-world data. Currently, my researches focus on ***graph learning***, ***relation foundation models*** (especially over the graph and multimodal data), ***recommender systems***, and ***graph-based RAG for LLMs***. Some of my research papers have been published at representative data mining conferences.

EXPERIENCE

Eagle Lab@Zhejiang University, Hangzhou, P.R. China

- Research Assistant — Sep 2022 – Mar 2025
  - Supervisors: Prof. Sheng Zhou and Prof. Jiajun Bu
  - Focus: graph learning, graph anomaly detection, and recommender systems.

DEEP Lab@The Hong Kong Polytechnic University, Hong Kong, P.R. China

- Visiting Research Assistant — Jul 2024 – Oct 2024
  - Supervisors: Dr. Hao Chen and Prof. Xiao Huang
  - Focus: graph foundation models and relation-enhanced large language models.

CRO Security Technology Team@Alibaba Group, Hangzhou, P.R. China

- Research Intern, Graph Risk Control Group — Jun 2023 – Nov 2023
  - Supervisors: Mr. Ao Li
  - Focus: graph anomaly detection and multi-label node classification.

NLP Center@Meituan, Beijing, P.R. China

- Research Intern, Graph Learning Group — Feb 2022 – Aug 2022
  - Supervisors: MS. Hao Xu and MS. Mengdi Zhang
  - Focus: dynamic graph learning and graph pre-training.

RecSys Group@Jinan University, Guangzhou, P.R. China

- Research Assistant — Oct 2019 – Jan 2022
  - Supervisors: Dr. Hao Chen and Prof. Feiran Huang
  - Focus: graph learning and recommender systems.

PUBLICATIONS

CONFERENCE PAPERS (* EQUAL CONTRIBUTIONS)

[1] Yijie Zhang*, Yuanchen Bei*, Hao Chen*, et.al, "Multi-Behavior Collaborative Filtering with Partial Order Graph Convolutional Networks", in *KDD*, 2024. **[Applied in Alibaba Taobao]**

[2] Hao Chen*, Yuanchen Bei*, Qijie Shen, et.al, "Macro Graph Neural Networks for Online Billion-Scale Recommender Systems", in *WWW*, 2024. **[Applied in Alibaba Taobao]**

[3] Yuanchen Bei, Hao Xu, Sheng Zhou, Huixuan Chi, et.al, "CPDG: A Contrastive Pre-Training Method for Dynamic Graph Neural Networks", in *ICDE*, 2024.

[4] Ruochen Liu, Hao Chen, Yuanchen Bei, et.al, "Fine-Tuning Out-of-Vocabulary Item Recommendation with User Sequence Imagination", in *NeurIPS*, 2024. **[Spotlight]**

[5] Weijun Chen*, Yuanchen Bei*, Qijie Shen, Hao Chen, et.al, "Feedback Reciprocal Graph Collaborative Filtering", in *CIKM*, 2024.

[6] Yuanchen Bei, Sheng Zhou, Qiaoyu Tan, Hao Xu, et.al, "Reinforcement Neighborhood Selection for Unsupervised Graph Anomaly Detection", in *ICDM*, 2023.

[7] Yuanchen Bei, Hao Chen, Shengyuan Chen, Xiao Huang, et.al, "Non-Recursive Cluster-Scale Graph Interacted Model for Click-Through Rate Prediction", in *CIKM*, 2023.

PRE-PRINT & UNDER-REVIEWED PAPERS

[1] Yuanchen Bei, et.al, a submission with the main topic of "Multi-label Classification with GNNs", under *KDD* review, 2025.

[2] Zhuonan Zheng, Yuanchen Bei, Sheng Zhou, Yao Ma, et.al, "Revisiting the Message Passing in Heterophilous Graph Neural Networks", *Arxiv* & under *ICLR* review, 2025.

[3] Feiran Huang, Yuanchen Bei, Zhenghang Yang, Junyi Jiang, et.al, "Large Language Model Interaction Simulator for Cold-Start Item Recommendation", *Arxiv* & under *WSDM* review, 2025.

[4] Chengyu Lai, Sheng Zhou, Zhimeng Jiang, Qiaoyu Tan, Yuanchen Bei, et.al, "Formulating and Benchmarking Recommendation Editing", *Arxiv* & under *WWW* review, 2025.

[5] Yuanchen Bei, Sheng Zhou, Jinke Shi, Yao Ma, et.al, "Guarding Graph Neural Networks for Unsupervised Graph Anomaly Detection", *Arxiv* & under *TNNLS* review, 2024.

[6] Feiran Huang, Yuanchen Bei, et.al, a submission with the main topic of "Generative Adversarial Learning for Cold-Start Recommendation", under *TKDE* review, 2024.

[7] Hao Chen, Yuanchen Bei, et.al, a submission with the main topic of "Correlation Model for Recommendation", under *TKDE* review, 2023.

WORKSHOP PAPERS

[1] Yijie Zhang, Yuanchen Bei, Shiqi Yang, Hao Chen, et.al, "Alleviating Behavior Data Imbalance for Multi-Behavior Graph Collaborative Filtering", in *IWLKG@ICDM*, 2023.

[2] Huixuan Chi, Hao Xu, Mengya Liu, Yuanchen Bei, et.al, "Modeling Spatiotemporal Periodicity and Collaborative Signal for Local-Life Service Recommendation", in *KDAH@CIKM*, 2023.

[3] Yue Xu, Hao Chen, Zengde Deng, Yuanchen Bei, and Feiran Huang, "Flattened Graph Convolutional Networks For Recommendation", in *DLP@KDD*, 2022.

PATENTS

[1] Feiran Huang, Zhiquan Liu, and Yuanchen Bei, "Text Sentiment Analysis Method Based on Multi-Level Graph Pooling", in *US Patent*, No. 11,687,728, 2023.

[2] Feiran Huang, Guan Liu, and Yuanchen Bei, "Social Recommendation Method Based on Multi-Feature Heterogeneous Graph Neural Networks", in *US Patent*, No. 11,631,147, 2023.

SELECTED OPEN-SOURCE PROJECTS

- Cold-Start Recommendation Resource Library & Toolbox (Include 20+ Representative Models).
- DreamerGPT: Chinese Instruction-tuning for Large Language Model (Instruction Tuning for Open-Source LLMs with Chinese Corpus).
- Graph Pre-Training Library (Literature and Resource Collection for Graph Pre-Training).
- DGraph-Fin Leaderboard Top-2 Solution (A Benchmark Leaderboard for Large-Scale Dynamic Graph Anomaly Detection).

HONORS & AWARDS

- First Class Scholarship, Zhejiang University. Nov 2023
- Outstanding Undergraduate Student & Thesis. Jun 2022
- National Scholarship (Top 1%). Dec 2021
- First Class Scholarship, Jinan University. May 2020

ACADEMIC SERVICES

- Conference Reviewer: KDD (2024, 2025), ICLR 2025, ECAI 2024.
- Invited Journal Reviewer: ACM TKDD (Since 2023), IEEE TII (Since 2024), IEEE TKDE (Since 2024).

[*CV compiled on 2024-09-27*]