

# Yuanchen Bei

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## EDUCATION

**Zhejiang University**, Hangzhou, P.R. China

- M.S. in Computer Technology Sep 2022 – Mar 2025
  - Now a second-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.
  - Cumulative GPA: 4.25 / 5.00 (**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)

- [6] Yijie Zhang\*, Yuanchen Bei\*, Hao Chen\*, Qijie Shen, et.al, “Multi-Behavior Collaborative Filtering with Partial Order Graph Convolutional Networks”, in *KDD*, 2024. **[Applied in Alibaba Taobao Homepage]**
- [5] Hao Chen\*, Yuanchen Bei\*, Qijie Shen, Yue Xu, et.al, “Macro Graph Neural Networks for Online Billion-Scale Recommender Systems”, in *WWW*, 2024. **[Applied in Alibaba Taobao Homepage]**
- [4] Yuanchen Bei, Hao Xu, Sheng Zhou, Huixuan Chi, et.al, “CPDG: A Contrastive Pre-Training Method for Dynamic Graph Neural Networks”, in *ICDE*, 2024.
- [3] Weijun Chen\*, Yuanchen Bei\*, Qijie Shen, Hao Chen, et.al, “Feedback Reciprocal Graph Collaborative Filtering”, in *CIKM*, 2024.
- [2] Yuanchen Bei, Sheng Zhou, Qiaoyu Tan, Hao Xu, et.al, “Reinforcement Neighborhood Selection for Unsupervised Graph Anomaly Detection”, in *ICDM*, 2023.
- [1] 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 PAPERS

- [4] Zhuonan Zheng, Yuanchen Bei, Sheng Zhou, Yao Ma, et.al, “Revisiting the Message Passing in Heterophilous Graph Neural Networks”, under *NeurIPS* review, 2024.
- [3] Chengyu Lai, Sheng Zhou, Zhimeng Jiang, Qiaoyu Tan, Yuanchen Bei, et.al, “Better Late Than Never: Formulating and Benchmarking Recommendation Editing”, under *NeurIPS* review, 2024.
- [2] Yuanchen Bei, Sheng Zhou, Jinke Shi, Yao Ma, et.al, “Guarding Graph Neural Networks for Unsupervised Graph Anomaly Detection”, under *IEEE TNNLS* review, 2024.
- [1] Feiran Huang, Zhenghang Yang, Junyi Jiang, Yuanchen Bei, et.al, “Large Language Model Interaction Simulator for Cold-Start Item Recommendation”, under *WSDM* review, 2024.

#### WORKSHOP PAPERS

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

#### PATENTS

- [2] 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.
- [1] 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

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|---|----------|
| ▪ 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), ECAI 2024.
- Invited Journal Reviewer: ACM TKDD (Since 2023), IEEE TII (Since 2024), IEEE TKDE (Since 2024).

[CV compiled on 2024-09-06]