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 anomaly detection, recommender systems, multi-modal relation modeling,*** **and** *relation foundation models*. Some of my research papers have been published at representative data mining conferences, such as KDD, WWW, ICDE, ICDM, and CIKM.

EXPERIENCE

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

- Visiting Research Assistant   Jun 2024 – Sep 2024
  - Supervisors: Dr. Hao Chen and Prof. Xiao Huang
  - Focus: multimodal large language models and graph foundation models.

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 multi-modal relation learning.

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)

[5] Yijie Zhang*, <u>Yuanchen Bei</u>*, Hao Chen*, Qijie Shen, et.al, "Multi-Behavior Collaborative Filtering with Partial Order Graph Convolutional Networks", in *KDD*, 2024. **[Applied in Alibaba Taobao Homepage]**

[4] Hao Chen*, <u>Yuanchen Bei</u>*, Qijie Shen, Yue Xu, et.al, "Macro Graph Neural Networks for Online Billion-Scale Recommender Systems", in *WWW*, 2024. **[Applied in Alibaba Taobao Homepage]**

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

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

[1] <u>Yuanchen Bei</u>, 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 (* EQUAL CONTRIBUTIONS)

[4] Zhuonan Zheng, <u>Yuanchen Bei</u>, 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, <u>Yuanchen Bei</u>, et.al, "Better Late Than Never: Formulating and Benchmarking Recommendation Editing", under *NeurIPS* review, 2024.

[2] <u>Yuanchen Bei</u>, 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*, <u>Yuanchen Bei</u>*, et.al, "Large Language Model Interaction Simulator for Cold-Start Item Recommendation", under *ACM TOIS* review, 2024.

WORKSHOP PAPERS

[3] Yijie Zhang, <u>Yuanchen Bei</u>, 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, <u>Yuanchen Bei</u>, et.al, "Modeling Spatiotemporal Periodicity and Collaborative Signal for Local-Life Service Recommendation", in *KDAH@CIKM*, 2023.

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

PATENTS

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

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

SELECTED OPEN-SOURCE PROJECTS

- A Comprehensive Cold-Start Recommendation Library & Toolbox.
- DreamerGPT: Chinese Instruction-tuning for Large Language Model. (Instruction Tuning for Open-Source LLMs with Chinese Corpus)
- Graph Pre-Training Library. (A Comprehensive Library of Graph Pre-Training Literature)
- 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.   Dec 2021
- First Class Scholarship, Jinan University.   May 2020

ACADEMIC SERVICES

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

[*CV compiled on 2024-06-30*]