

# Zhuoning Guo 郭茁宁

Ph.D. Student | The Hong Kong University of Science and Technology (Guangzhou) | 2022-2026 (Expected)

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Date of Birth: April 17<sup>th</sup>, 2000 | Links: [Personal Homepage](#); [GitHub](#); [Google Scholar](#)

Research Interest: Information Retrieval, Multimodal Learning, Graph Learning/Search/Mining

## EDUCATION

- **The Hong Kong University of Science and Technology (Guangzhou), China (Ph.D.)** 2022.09-Now
  - Artificial Intelligence Thrust, Information Hub (Supervisors: Prof. Hao Liu & Prof. Qiang Yang)
  - Research Experience:
    - ◆ Multimodal Learning (2024-2025): *Geospatial Multimodal Generative Pretraining (On-going)*
    - ◆ Information Retrieval (2024-2025): *SIGKDD 2025*
    - ◆ Graph Learning (2022-2024): *SIGKDD 2022/2024/2025, AAAI 2023/2024*
- **Harbin Institute of Technology, Harbin, Heilongjiang, China (B.E.)** 2018.08-2022.06
  - Software Engineering, Faculty of Computing GPA: 3.6/4.0, rank 7% (overall)

## INTERNSHIP

- **Baidu Recommendation Architecture Department (Remote Research Intern)** 2024.05-2024.02
  - **Interests:** Information retrieval and industrial recommendation
- **Baidu Research & Talent Intelligence Center (Research Intern)** 2021.10-2022.08
  - **Interests:** Data mining for social science (Mentors: Dr. Hengshu Zhu & Prof. Hui Xiong)
- **Tencent AI Lab & HKUST (Remote Research Intern)** 2021.05-2021.10
  - **Interests:** Graph learning for human mobility (Mentors: Dr. Yu Rong & Prof. Jia Li)
- **Microsoft Research Asia (MSRA) DKI Group (Research Intern)** 2020.11-2021.04
  - **Interests:** Computer graphics and human-computer interaction (Mentors: Dr. Shizhao Sun & Dr. Jian-guang Lou)

## VISIT

- **The Hong Kong University of Science and Technology, China (Visiting Ph.D. Student)** 2024.01-2024.08
  - Department of Computer Science and Engineering (Supervisors: Prof. Yangqiu Song)
- **University of Cambridge, England (Visiting Undergraduate)** 2020.01-2020.02
  - Fitz William College (With scholarships from HIT)

## PUBLICATION

- **Zhuoning Guo**, et al. "GPU-accelerated Multi-relational Parallel Graph Retrieval for Web-scale Recommendations." Submitted to **SIGKDD 2025**.
- **Zhuoning Guo**, et al. "HiFGL: A Hierarchical Framework for Cross-silo Cross-device Federated Graph Learning." Accepted by **SIGKDD 2024 (Oral)**.
- **Zhuoning Guo**, et al. "Talent Demand-Supply Joint Prediction with Dynamic Heterogeneous Graph Enhanced Meta-Learning." Accepted by **SIGKDD 2022 (Oral)**.
- **Zhuoning Guo**, et al. "Labor Migration Modeling through Large-scale Job Query Data." Accepted by **PAKDD 2025 (Oral)**.

- **Zhuoning Guo**, et al. “Discrepant Homophily co-preserved Graph Convolutional Network for Labor Migration Forecasting.” Accepted by **TMC Workshop, SIGKDD 2024**.
- **Zhuoning Guo**, et al. “Against Multifaceted Graph Heterogeneity via Asymmetric Federated Prompt Learning.” Submitted to **SIGKDD 2025**.
- **Zhuoning Guo**, et al. “Convergence-aware Clustered Federated Graph Learning Framework for Collaborative Inter-company Labor Market Forecasting.” Arxiv. (Preprint)
- Wen Shuo Chao, Zhaopeng Qiu, Likang Wu, **Zhuoning Guo**, et al. “A Cross-View Hierarchical Graph Learning Hypernetwork for Skill Demand-Supply Joint Prediction.” Accepted by **AAAI 2024 (Oral)**.
- Yang Liu, Yu Rong, **Zhuoning Guo**, et al. “Human Mobility Modeling During the COVID-19 Pandemic via Deep Graph Diffusion Infomax.” Accepted by **AAAI 2023**.
- Wenyuan Kong, Zhaoyun Jiang, Shizhao Sun, **Zhuoning Guo**, et al. “Aesthetics++: Refining Graphic Designs by Exploring Design Principles and Human Preference.” Accepted by **TVCG**.

## AWARD

- **NOIP First Award (Twice, Top 20)** (2018 HIT Independent Recruitment Admission) 2013.11 & 2016.11
- Mathematical Contest in Modeling Finalist 1% (International, Leader) 2020.03
- National IoT Competition Northeast Region Special Award Top4 (Leader) 2020.08
- Kaggle Competition: Machine Learning from Disaster 6% 2019.12-2020.01
- Contemporary Undergraduate Mathematical Contest in Modeling First Award 2019.10

## HONOR

- President of HIT Chess Club 2019-2022
- University Outstanding CLP Member 2019
- University Outstanding Student Cadre 2020
- Chairman of Massive Data Club 2020-2022
- Captain of the Football Team of the Faculty of Computing 2020-2022

## VOLUNTEER

- **Volunteer of The Innovation & Entrepreneurship Education Alliance of China** 2019.10
  - **Introduction:** Volunteer at the annual meeting of The Innovation and Entrepreneurship Education Alliance of China, undertaken by Harbin Institute of Technology.
- **Teaching volunteer, Shangri-La, Yunnan, China** 2019.01-2019.02
  - **Introduction:** Teaching students several subjects at a local suburban primary school.

## SKILLS

- English: IELTS 6.5(5.5) (2021.08)
- Programming Language: Python (Recently), C/C++, Java, C#
- Frameworks: PyTorch(-Lightning), Numpy, Scikit-Learn, Pandas, DGL, PyG, NetworkX, ...