

BO JIANYUAN

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🎓 EDUCATION

Singapore Management University , Singapore <i>PhD in Computer Science</i> , expected July 2025 · GPA: [4.0/4.0] Research: Graph Neural Networks, Self-supervised Learning, Generative AI, Graph Foundation Models	Aug 2020 – Present
Singapore Management University , Singapore <i>Master of IT in Business</i> in Artificial Intelligence · GPA: [4.0/4.0]	Jan 2019 – Jun 2020
University of Southern California , Los Angeles, USA <i>Master of Science</i> in Mechanical Engineering · GPA: [3.7/4.0]	Jan 2015 – Dec 2016
Huazhong Agricultral University , Hubei, China <i>Bachelor of Engineering</i> in Mechatronics Engineering · GPA: [3.5/4.0]	Sep 2010 – Jun 2014

🏢 EXPERIENCE

Huawei Noah's Ark Lab , Singapore <i>Research Intern</i> <ul style="list-style-type: none">Engineered graph-based indexing and semantic-aware linking to enhance retrieval effectiveness, enabling context-aware information access for LLM applications.Developed the GraphRAG algorithm, achieving 3–8% accuracy improvement over vanilla RAG on multi-hop QA datasets by controlling graph quality and connectivity.Demonstrated robustness and scalability by integrating GraphRAG with various LLMs, consistently outperforming naive RAG baselines; validated performance through comprehensive benchmarks.	Jan 2025 – Apr 2025
Fujitsu-SMU Urban Computing and Engineering (UNiCEN) Corp. Lab , Singapore <i>Graduate Research Student</i> <ul style="list-style-type: none">Optimized QUBO solver for large-scale scheduling (TSP, QAP) via data scaling and constraint projection, improving solution quality and feasibility.Designed a divide-and-conquer framework, reducing optimality gaps by 25% on hard instances and outperforming state-of-the-art baselines (qbsolv).Published GECCO'22 paper showing hardware-agnostic QUBO techniques can rival classical solvers (Concorde, CPLEX) in both quality and runtime.	May 2019 – Sep 2020

📖 PUBLICATION

- Quantizing Text-attributed Graphs for Semantic-Structural Integration**
Jianyuan Bo, Hao Wu, and Yuan Fang · *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2025
- Contrastive General Graph Matching with Adaptive Augmentation Sampling**
Jianyuan Bo and Yuan Fang · *International Joint Conference on Artificial Intelligence (IJCAI)*, 2024
- CORE: Contrastive Masked Feature Reconstruction on Graphs**
Jianyuan Bo and Yuan Fang · *Under Review*, 2025
- A Survey of Few-Shot Learning on Graphs: from Meta-learning to Pre-training and Prompting**
Xingtong Yu, Yuan Fang, Zemin Liu, Yuxia Wu, Zhihao Wen, **Jianyuan Bo**, Xinming Zhang and Steven C.H. Hoi · *Preprint*, 2024
- Techniques to Enhance a QUBO solver for Permutation-based Combinatorial Optimization**
Siong Thye Goh, **Jianyuan Bo**, Sabrish Gopalakrishnan, and Hoong Chuin Lau · *Genetic and Evolutionary Computation Conference (GECCO)*, 2022

⚙️ SKILLS

- Programming Languages:** Python, Java, C++, SQL, Shell Scripting
- Machine Learning & AI:** PyTorch, TensorFlow, Keras, Graph Neural Networks, Large Language Models, Deep Learning, Natural Language Processing, Transfer Learning, Few-shot Learning
- Research & Development:** Algorithm Design, Data Structures, Software Engineering, Version Control (Git), Docker
- Data Science:** Data Analysis, Statistical Modeling, Data Visualization, Big Data, Optimization Algorithms

💖 HONORS AND AWARDS

- Fujitsu-SMU UNiCEN Scholarship** (2019 – 2020)
Outstanding academic performance and research potential in Artificial Intelligence and Machine Learning
- Dean's List**, School of Computing and Information Systems (2019 – 2020)
Recognition for academic excellence in Computer Science and Information Systems

📁 MISCELLANEOUS

- Singapore Permanent Resident
- Website: <https://www.bojianyuan.com/>
- GitHub: <https://github.com/jybosg>
- Technical Skills: Research Methodology, Problem Solving, Team Collaboration, Technical Writing, Presentation Skills