Langzhou He

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Education

- **Southwest University** — Chongqing, China
  Bachelor of Science in Computer Science; GPA: 3.9/4.0 — *Sep. 2020 – June. 2024*
  - Coursework:Mathmatical Analysis, Linear Algebra, Probability and Statistics, Operating System Theory, C++ Programming, Design and Analysis of Algorithms, Computer Networks, Data Structure, Discrete Mathematics, Computer Vision, Machine Learning, Data Mining.

Experience

- **Dartmouth College, Department of Computer Science** — Hanover, USA
  Research Assistant, advised by Professor Yujun Yan — *June 2023 - Jan 2024*
  - Working on developing principles for graph-based ML models that are both expressive and generalisable

- **iOPEN Laboratory, Northwestern Polytechnical University** — Xi'an, China
  Research Assistant, advised by Professor Chao Gao — *Mar 2021 - Feb 2023*
  - Studied the sparseness problem in recommendation system and proposed a two-staged GFNCF model to help solve the problem. Conducted extensive experiments on five publicly available real-world datasets to verify the effectiveness of the model.
  - Used graph spatial-temporal self-attention network with contrastive regularization for passenger flow prediction.
  - Developed a novel optimized dynamic deep graph infomax method for dynamic community detection.

- **Data Science and Network Intelligence Laboratory, Southwest University** — Chongqing, China
  Research Assistant, advised by Professor Li Tao — *Nov 2020 - present*
  - Explored multi-agent deep reinforcement learning techniques. Developd a reinforcedment learning method to identify influential nodes in large-scale real networks while combining the strengths of both temporal heterogeneity and distributed local policy selection.
  - Proposed a new measure and summarized three main temporal features for node pairs in temporal networks and integrate them using weighted arithmetic mean.
  - Verified the effectiveness of the proposed temporal neighborhood change centrality and conducted experiments on various temporal networks.

Publications

- **1**: **L. He**, S. Wang, J. Wang, C. Gao and L. Tao. Integrating Global Features into Neural Collaborative Filtering. *Knowledge Science, Engineering and Management (KSEM)*, pp 325-336, 2022.
- **2**: H. Liu, **L. He**, F. Zhang, Z. Wang, and C.Gao. Dynamic community detection over evolving networks based on the optimized deep graph infomax, *Chaos 32*, 053119 (2022).
- **3**: X. Qi, **L. He**, J. Wang, Z. Du, Z. Luo and X. Li. A Multi-objective Evolutionary Algorithm Based on Multi-layer Network Reduction for Community Detection, *Knowledge Science, Engineering and Management (KSEM)*, pp 141-152, 2022.
- **4**: S. Kong, **L. He**, G. Zhang, L. Tao and Z. Zhang, Identifying Multiple Influential Nodes for Complex Networks Based on Multi-Agent Deep Reinforcement Learning, *Pacific Rim International Conference on Artificial Intelligence (PRICAI)*, pp 120-133, 2022.
- **5**: L. Tao, S. Kong, **L. He**, F. Zhang, X. Li, T. Jia and Z. Han, A Sequential-Path Tree-Based Centrality for Identifying Influential Spreaders In Temporal Networks. *Chaos, Solitons & Fractals*,Volume 165, Part 1, 2022.
- **6**: Z. Wu, **L. He**, L. Tao, Y. Wang, Z. Zhang, Temporal Neighborhood Change Centrality for Important Node Identification in Temporal Networks, *International Conference on Neural Information Processing*, pp 455-467, 2023.
- **7**: J. Wu, **L. He**, J. Tao and L. Tao, Temporal Link Prediction Based on Node Dynamics, *Chaos, Solitons & Fractals*, Volume 170, 113402, 2023.

Skills list

- **Languages**: English (IELTS:7.0/9.0), Chinese (native language)
- **Programming**: C/C++, C#, Python, Pytorch, TensorFlow, LATEX, Markdown

Others

- **Awards**: Academic Science Award(1%), Merit Student of University (5%), Second-tier Scholarship (10%)