Jian Yang **Last update: September 12, 2021**

Contact Information

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Research Background

- **Graph Unsupervised Learning**: Graph Clustering/ Community Detection, Graph Representation Learning, Graph Contrastive Learning.
- **Graph Conformal Prediction:** Conformal Prediction for Node Classification.

Education

South China University of Technology (SCUT), Guangzhou, China. 2018–2022

- B.Eng., Software Engineering.
- Advisor: Prof. Jian Chen, Dr. Zhibin Hu and Prof. Yan Yan (Washington State University).

Technical Skills

- *Programming Languages*: C/C++, Python, LaTeX, Java, Pascal, Lisp.
- *Technical Softwares*: MATLAB.

Employment Experience

Tencent, Shenzhen, China. May 2021 – Sept 2021

- Machine Learning Research Intern.
- Mentor: Dr. Xuyuan Xu and Dr. Mengyang Liu.

Research Experience

- **Graph Clustering and Community Detection** Apr 2020–Present
  Discovery the community structure in social network by graph contrastvie learning.
  - Use contrastive learning to improve the robustness of the representation.
  - Achieve state-of-the-art performance on Cora, Citeseer, and PubMed.
  - The paper is under review. (First author)
- **Large-scale Graph Representation Learning @ Tencent** May 2021–Sept 2021
  Video relationship chain analysis.
  - 1M nodes scale video-tag heterogeneous network representation learning, and classification of video nodes (3K categories)
  - Two training methods, transductive learning, and inductive learning are implemented. Transductive learning reaches 95% accuracy, inductive learning reaches 88%, and the baseline is 77%.
  - This model implements mini-batch training on large graph. It can complete inference within 10s for new nodes.
- **Graph Conformal Prediction** May 2021–Present
  An innovative distribution-free, nonparametric forecasting method, based on minimal assumptions.
  - Conformal Prediction (CP) is an independent algorithm to measure the reliability of the model.
  - The traditional CP requires samples to be i.i.d, we extend it to the node classification task.

Selected Publications

1. **Yang, J., Huang, J., Yan, Y., Hu, Z., & Chen, J.** *(2021).* Community Detection via Graph Contrastive Learning. *Under review.*

Honors and Awards

- ***First Prize*** National Olympiad in Informatics in Provinces (NOIP). 2016(Senior High School)
- ***Silver Award (13th)*** Guangdong Collegiate Programming Contest (GPCPC). 2019
- ***First Prize*** SCUT Software Developing Contest. 2019
- ***Third Prize*** SCUT Scholarship. 2019