

JUNCHENG LIU

✉ liujuncheng96@gmail.com · ☎ (+65) 96146774 · in juncheng-liu

EDUCATION

National University of Singapore, Singapore Aug. 2018 – Present

- Ph.D. Candidate in Computer Science Department
- Advisor: Prof. Xiaokui Xiao
- Also closely work with Prof. Bryan Hooi

Sichuan University, Chengdu, China Sep. 2014 – Jun. 2018

- Bachelor of Engineering in Computer Science and Technology
- **Honors program** for top 5% talented students
- GPA: 90.38/100 (3.74/4.0); Ranking: 3/15 (honors program), 5/365 (college)

EXPERIENCE

Alibaba DAMO Academy, Hangzhou, China Sep. 2021 – Feb. 2022

Research Intern at Machine Intelligence Group, mentored by Dr. Dayiheng Liu

- Work on entity alignment on cross-lingual knowledge graphs.

Tencent AI Lab, Shenzhen, China Jan. 2018 – Jul. 2018

Research Intern at Computer Vision Group, mentored by Dr. Zequn Jie and Dr. Lin Ma

- Work on X-ray image detection.

National University of Singapore, Singapore Jul. 2017 – Oct. 2017

Visiting Research Student at NExT++, School of Computing

PUBLICATIONS

1. **Juncheng Liu**, Zequn Sun, Bryan Hooi, Yiwei Wang, Dayiheng Liu, Baosong Yang, Xiaokui Xiao, Muhao Chen. Dangling-Aware Entity Alignment with Mixed High-Order Proximities. Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) Findings 2022.
2. **Juncheng Liu**, Yiwei Wang, Bryan Hooi, Renchi Yang, Xiaokui Xiao. LSCALE: Latent Space Clustering-Based Active Learning for Node Classification. European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) 2022. (Previous version on DLG-KDD'21)
3. **Juncheng Liu**, Kenji Kawaguchi, Bryan Hooi, Yiwei Wang, Xiaokui Xiao. EIGNN: Efficient Infinite-Depth Graph Neural Networks. Neural Information Processing Systems (NeurIPS) 2021.
4. Yiwei Wang, Muhao Chen, Wenxuan Zhou, Yujun Cai, Yuxuan Liang, Dayiheng Liu, Baosong Yang, **Juncheng Liu**, Bryan Hooi. Should We Rely on Entity Mentions for Relation Extraction? Debiasing Relation Extraction with Counterfactual Analysis. Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) 2022.
5. Xinjian Luo, Xiaokui Xiao, Yuncheng Wu, **Juncheng Liu**, Beng Chin Ooi. A Fusion-Denoising Attack on InstaHide with Data Augmentation. AAAI Conference on Artificial Intelligence (AAAI) 2022.
6. Renchi Yang, Jieming Shi, Xiaokui Xiao, Yin Yang, **Juncheng Liu**, Sourav S. Bhowmick. Scaling Attributed Network Embedding to Massive Graphs. Proceedings of the VLDB Endowment 2021. (**Best Research Paper Award**)
7. Yiwei Wang, Wei Wang, Yuxuan Liang, Yujun Cai, **Juncheng Liu**, Bryan Hooi. NodeAug: Semi-Supervised Node Classification with Data Augmentation. ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2020.

OTHER PHD RESEARCH PROJECTS

Mutual Information Maximization on Heterophilic Graphs

Jan. 2021 – Sep. 2021

- We propose a new metric based on mutual information to measure homophily ratio.
- We propose a new self-supervised method based on mutual information maximization for node classification on heterophilic graphs.

Recommendation System with Graph Neural Networks

Jun. 2019 – Feb. 2020

- Develop a simple yet effective recommendation algorithm for implicit feedback datasets.
- Achieve 10%-20% performance improvements compared with several state-of-the-art GNN-based models, e.g. Neural Graph Collaborative Filtering (NGCF), on 3 commonly used datasets.

SKILLS

- Programming Languages: Python, C/C++, Matlab.
- Tools: PyTorch, Sklearn, Tensorflow, Git.

SELECTED HONORS AND AWARDS

Best Research Paper Award, International Conference on Very Large Data Bases (VLDB)	2021
10th Prize on KDD Cup (<i>AutoGraph Track</i>)	2020
NUS Research Scholarship	2018–2022
Outstanding Graduate of Sichuan University	2018
National Scholarship (<i>top 0.2% undergraduates nationwide in China</i>)	2016 & 2017
First Class Scholarship of Sichuan University (<i>top 5%</i>)	2016 & 2017
Bronze Medal in the ACM-ICPC Asia Regional Contest Qingdao Site	2016
Bronze Medal in China Collegiate Programming Contest Hefei Site	2016