Tinglin Huang

Research Assistant, Tsinghua University

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Education

Tsinghua University — Beijing, China
Visiting student at Department of Computer Science and Technology — *Dec. 2020 - Jun. 2021*
- **Advisor:** Prof. *Jie Tang*

National University of Singapore — Singapore
Visiting student at NExT++ Research Center — *May. 2020 - Nov. 2020*
- **Advisor:** Prof. *Tat-Seng Chua*

Zhejiang University — Hangzhou, China
M.Eng. in Software Engineering — *Sep. 2019 - Jun. 2021*

Shenzhen University — Shenzhen, China
B.Eng. in Software Engineering with honor — *Sep. 2015 - Jun. 2019*
- **GPA:** 3.96/4.5 **Ranking:** Top 5%
- **Advisor:** Prof. *Joshua Zhexue Huang*

Research Interests

Data Mining: Recommendation System, Network Embedding, Knowledge Graph Reasoning, Social Networks
Machine Learning: Graph Neural Network, Self-Supervised Learning, Semi-Supervised Learning

Publications & Preprints

Wenzheng Feng, Yuxiao Dong, **Tinglin Huang**, Ziqi Yin, Xu Cheng, Evgeny Kharlamov and Jie Tang. "GRAND+: Scalable Graph-based Semi-Supervised Learning with Better Generalization". Submitted to *WWW*, 2022.

Tinglin Huang, Yuxiao Dong, Ming Ding, Zhen Yang, Wenzheng Feng, Xinyu Wang and Jie Tang. "MixGCF: An Improved Training Method for Graph Neural Network-based Recommender Systems". In *KDD*, 2021

Xiang Wang*, **Tinglin Huang***, Dingxian Wang, Yancheng Yuan, Zhenguang Liu, Xiangnan He and Tat-Seng Chua. "Learning Intents behind Interactions with Knowledge Graph for Recommendation". In *WWW*, 2021 (**Oral Presentation, Best Paper Track**)

Tinglin Huang, Yulin He, Dexin Dai, Wenting Wang and Joshua Zhexue Huang. "Neural Network-Based Deep Encoding for Mixed-Attribute Data Classification". In *PAKDD*, 2019

Yingying Zhu, Min Tong, **Tinglin Huang**, Zhengkun Wen and Qi Tian. "Learning Affective Features Based on VIP for Video Affective Content Analysis". In *PCM*, 2018

Awards & Achievements

Excellent graduate scholarship of Zhejiang University (**Top 1%**) — *Jun. 2021*
Excellent graduate of Shenzhen University (**Top 1%**) — *Jun. 2019*
Merit Scholarship of Shenzhen University (**Top 5%**) — *Sep. 2016, 2017, 2018, 2019*
2nd Prize, Chinese Undergraduate Mathematics Contest in Modeling (**Top 2%**) — *Jul. 2018*
3rd Prize, Chinese Undergraduate Computer Design Contest (**Top 5%**) — *Sep. 2017*

Research Experience

Knowledge Engineering Group Tsinghua University
Advisor : Prof. *Jie Tang* and Dr. *Yuxiao Dong* *Dec. 2020 - Present*

MixGCF: An Improved Training Method for Graph Neural Network-based Recommender Systems
- Explored a general negative sampling plugin for graph neural network-based CF method, which applies the hop mixing technique to synthesize hard negatives rather than sampling existing ones.
- Performed experiments to show our proposed method can significantly improve the performance of recommenders.

GRAND+: Scalable Graph-based Semi-Supervised Learning with Better Generalization
- Proposed GRAND+, which applies an advanced consistency loss and matrix approximation approach for leveraging unlabeled node and achieving good scalability.
- Conducted experiments to demonstrate that the proposed model scales well and achieves the best accuracy.

NExT++ Center National University of Singapore
Advisor : Prof. *Tat-Seng Chua* and Dr. *Xiang Wang* *May. 2020 - Nov. 2020*

Learning Intents behind Interactions with Knowledge Graph for Recommendation
- Proposed a knowledge graph-based recommendation model, KGIN, which consider user-item relationships at the finer granularity of intents and long-range semantics of relational paths under the GNN paradigm.
- Empirical studies show that KGIN achieves significant improvements across three benchmark datasets.

National Laboratory for Big Data System Computing Shenzhen University
Advisor : Prof. *Joshua Zhexue Huang* *May. 2017 - May. 2018*

Neural Network-Based Deep Encoding for Mixed-Attribute Data Classification
- Proposed an auto-encoder with a new regularization based on weighted entropy to deal with mixed attribute data.
- Conducted experiments to verify that it can help classifiers to achieve better performance compared with traditional methods.