

Qiang Yang

PHD STUDENT · COMPUTER SCIENCE

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Education

King Abdullah University of Science and Technology

Jeddah, Saudi Arabia

PHD CANDIDATE

January 2019 - present

- Advisor: Dr. Xiangliang Zhang and Xin Gao

King Abdullah University of Science and Technology

Jeddah, Saudi Arabia

INTERN

May 2016 - November 2016

- Advisor: Dr. Xiangliang Zhang

Soochow University

Suzhou, China

MASTER DEGREE

September 2014 - July 2017

- Advisor: Dr. Zhixu Li

Pingdingshan University

Pingdingshan, China

BACHELOR DEGREE

September 2010 - July 2014

Professional Experience

2020-2021 **Graduate Teaching Assistant**, Data Mining, KAUST, Saudi Arabia

2017-2018 **Graduate Research Assistant**, Knowledge Graph Mining, Soochow University, China

Research Interests

Interpretable Graph Mining. Traditional graph mining is limited to interpreting the prediction by graph models, such as GCNs, GAT, etc., which are black-box. Interpretable Graph Mining not only makes accurate predictions but also interprets why the results of the prediction are output by generating a specific type of structure, such as interpretable paths or sub-graphs.

Heterogeneous Graph Learning. Heterogeneous graphs such as academic graphs, social networks, knowledge graphs, etc., are much more complex than homogeneous graphs due to the different types of nodes and edges. Heterogeneous Graph Learning aims to learn the graph representation which can well utilize the characteristics of heterogeneity on graph-relevant tasks, such as node classification, link prediction, graph classification, etc.

Text and Multimodal Mining. Text Mining involves model processing, text understanding, and text generation, such as text classification, sentiment analysis, etc. With the help of pre-trained models, such as Bert, and Bart, etc., fine-grained sentiment analysis can help to understand and analyze the sentiments of input text accurately, whose performance is largely improved. Image captioning is one topic in Multimodal Mining to generate the summarized text from images and the relevant context.

Publications (Partial)

Qiang Yang, Changsheng Ma, Qiannan Zhang, Xin Gao, Chuxu Zhang, and Xiangliang Zhang. 2023. Greedy Policy-based Perturbation for Counterfactual Learning on Heterogeneous Graphs. in KDD.

Qiang Yang, Changsheng Ma, Qiannan Zhang, Xin Gao, Chuxu Zhang, and Xiangliang Zhang. 2023. Interpretable Research Interest Shift with Temporal Heterogeneous Graphs Detection. in WSDM.

Qiang Yang, Qiannan Zhang, Chuxu Zhang, and Xiangliang Zhang. 2022. Interpretable Relation Learning on Heterogeneous Graphs. in WSDM.

Qiang Yang, Xiaodong Wu, Xiuying Chen, Xin Gao, and Xiangliang Zhang. 2023. Multi-image Captioning with News Context via Adaptive Dual Attention. in ICDM (Under review).

- Qiang Yang**, Xiuying Chen, Changsheng Ma, Xin Gao, and Xiangliang Zhang. 2023. SenWave: A multi-language fine-grained sentiment analysis dataset for Covid-19 tweets. in NIPS (Under review).
- Qiang Yang**, Hind Alamro, Somayah Albaradei, etc. 2020. SenWave: Monitoring the global sentiments under the COVID-19 pandemic. in arXiv preprint arXiv:2006.10842.
- Qiang Yang**, Zhixu Li, An Liu, Guanfeng Liu, Lei Zhao, Xiangliang Zhang, Min Zhang, and Xiaofang Zhou. 2019. A Novel Hybrid Publication Recommendation System Using Compound Information. WWWJ (2019).
- Qiang Yang**, Zhixu Li, Binbin Gu, An Liu, Guanfeng Liu, Pengpeng Zhao, and Lei Zhao. 2016. CTextEM: Using Consolidated Textual Data for Entity Matching. In DASFAA.
- Qiang Yang**, Zhixu Li, Jun Jiang, Pengpeng Zhao, Guanfeng Liu, An Liu, and Jia Zhu. 2015. NokeaRM: Employing Non-key Attributes in Record Matching. In WAIM.
- Changsheng Ma, **Qiang Yang**, Xin Gao, and Xiangliang Zhang. 2022. Disentangled Molecular Graph Generation via an Invertible Flow Model. In CIKM.
- Xiangliang Zhang, **Qiang Yang**, et al. 2021. Rise and Fall of the Global Conversation and Shifting Sentiments during the COVID-19 Pandemic. Humanities and social sciences communications (2021) (Nature).
- Qiannan Zhang, Shichao Pei, **Qiang Yang**, Chuxu Zhang, Nitesh V Chawla, and Xiangliang Zhang. 2023. Cross-domain Few-shot Graph Classification with a Reinforced Task Coordinator. In AAAI.
- Qiannan Zhang, Xiaodong Wu, **Qiang Yang**, Chuxu Zhang, and Xiangliang Zhang. 2022. Few-shot Heterogeneous Graph Learning via Cross-domain Knowledge Transfer. In KDD.
- Qiannan Zhang, Xiaodong Wu, **Qiang Yang**, Chuxu Zhang, and Xiangliang Zhang. 2022. HG-Meta: Graph Meta-learning over Heterogeneous Graphs. In SDM.
- Jiaan Wang, Zhixu Li, **Qiang Yang**, Jianfeng Qu, Zhigang Chen, Qingsheng Liu, and Guoping Hu. 2021. SportsSum2.0: Generating High-Quality Sports News from Live Text Commentary. In CIKM.
- Li Zhang, Zhixu Li, and **Qiang Yang**. 2021. Attention-based Multimodal Entity Linking with High-quality Images. In DASFAA.

Awards & Fellowships

- 2018 **University Excellent Master Thesis Award**, Soochow University
- 2017 **Excellent Graduate Student Award**, Soochow University
- 2016 **National Scholarship Award**, Soochow University
- 2015 **Best Student Paper Award**, NDBC

Presentations

** presenting author; * mentored graduate*

- Qiang Yang**^{*}. 2023. Can We Use ChatGPT for Knowledge Graph and Vice Versa? Oral presentation. ADA Lab, Soochow University
- Qiang Yang**^{*}. 2022. Interpretable Research Interest Shift with Temporal Heterogeneous Graphs Detection. Oral presentation. Singapore, Singapore.
- Qiang Yang**^{*}. 2021. Interpretable Relation Learning on Heterogeneous Graphs. Oral presentation. Virtual Conference.

Teaching Experience

- Spring 2021 **Data Mining**, Teaching Assistant
- Spring 2017 **Database**, Teaching Assistant

Programming Skills

Python, Java, C