

# Jiaying Xu (徐家兴)

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## EDUCATION

<b>Nanyang Technological University (NTU)</b> PhD Candidate in Computer Science, advised by Yiping Ke Research interests: Graph Representation Learning, Neuroimaging, Healthcare	<b>Singapore</b> Aug 2021 – Dec 2024 (Expected)
<b>Beihang University (BUAA)</b> BS in Software Engineering	<b>Beijing, China</b> Sep 2016 - Jun 2020
<b>Tsinghua University (THU)</b> Visiting Student in Department of Computer Science and Technology, advised by Jie Tang	<b>Beijing, China</b> Jun 2018 - Jul 2020
<b>Nanyang Technological University (NTU)</b> Visiting Student in School of Computer Science and Engineering, advised by Yiping Ke	<b>Singapore</b> Jul 2019 - Sep 2019

## PUBLICATION

- Jiaying Xu**, Kai He, Mengcheng Lan, Qingtian Bian, Wei Li, Tiewing Li, Yiping Ke, Miao Qiao. Contrastformer: A Contrastive Transformer for Brain Networks. In Proceeding of the IEEE International Conference of Data Engineering (ICDE'24) (Under Review).
- Tiewing Li, Xiaochun Yang, Yiping Ke, Bin Wang, Yinan Liu, **Jiaying Xu**. Alleviating the Inconsistency of Multimodal Data in Cross-Modal Retrieval. In Proceeding of the IEEE International Conference of Data Engineering (ICDE'24) (Under Review).
- Jiaying Xu**, Qingtian Bian, Xinhang Li, Aihu Zhang, Yiping Ke, Miao Qiao, Wei Zhang, Wei Khang Jeremy Sim, and Balázs Gulyás. Contrastive Graph Pooling for Explainable Classification of Brain Networks. In Proceeding of the IEEE Transactions on Medical Imaging (TMI'23) (Major Revision) (IF: 11.037).
- Jiaying Xu\***, Aihu Zhang\*, Qingtian Bian, Vijay Prakash Dwivedi and Yiping Ke. Union Subgraph Neural Networks. In Proceedings of the 38th Annual AAAI Conference on Artificial Intelligence (AAAI'24).
- Jiaying Xu\***, Yunhan Yang\*, David Tse Jung Huang\*, Sophi Shilpa Gururajapathy\*, Yiping Ke, Miao Qiao, Alan Wang, Haribalan Kumar, Josh McGeown, and Eryn Kwon. Data-Driven Network Neuroscience: On Data Collection and Benchmark. In Proceedings of the 37th Conference on Neural Information Processing Systems (NeurIPS'23)
- Mengcheng Lan, Xinjiang Wang, Yiping Ke, **Jiaying Xu**, Litong Feng, and Wayne Zhang. SmooSeg: Smoothness Prior for Unsupervised Semantic Segmentation. In Proceedings of the 37th Conference on Neural Information Processing Systems (NeurIPS'23).
- Jiaying Xu**, Jinjie Ni, Yiping Ke. A Class-Aware Representation Refinement Framework for Graph Classification. In Proceeding of Information Sciences (Under Review).
- Qingtian Bian, **Jiaying Xu**, Hui Fang, Yiping Ke. CPMR: Context-Aware Incremental Sequential Recommendation with Pseudo-Multi-Task Learning. In Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (CIKM'23). **Oral**
- Xinhang Li, Xiangyu Zhao, **Jiaying Xu**, Yong Zhang, Chunxiao Xing. IMF: Interactive Multimodal Fusion Model for Link Prediction. In Proceedings of the ACM Web Conference (WWW'23).
- Jiaying Xu**, Jianbin Cui, Jiangneng Li, Wenge Rong, Noboru Matsuda. Entity Aware Syntax Tree Based Data Augmentation for Natural Language Understanding. arXiv preprint arXiv:2209.02267 (2022).

## TEACHING EXPERIENCE

<b>School of Computer Science and Engineering, Nanyang Technological University</b> Teaching Assistant of <i>Undergraduate Final Year Project</i>	<b>Singapore</b> Aug 2021 - Present
<ul style="list-style-type: none"><li>Provided advice for students about machine learning, graph algorithm and neuroimaging.</li></ul>	
<b>School of Software, Beihang University</b> Teaching Assistant of <i>Practice of Programming</i>	<b>Beijing, China</b> Aug 2018 - Sep 2018
<ul style="list-style-type: none"><li>Gave academic instructions on Machine Learning and Python for students during the lesson.</li><li>Provided advice for students to familiarize with the engineering process and develop a complete project independently.</li></ul>	

## PROFESSIONAL EXPERIENCE

**Automatic Drive Group, SenseTime Group Limited.****Beijing, China**

Research Intern

Sep 2020 – Jan 2021

- Worked on vehicle key point extraction and 3D object detection.

**Knowledge Computing Group, Microsoft Research Asia (MSRA)****Beijing, China**

Research Intern, advised by Börje Karlsson

Dec 2019 - Jun 2020

- Focused on named entity recognition (NER), studied its solution about transferring knowledge from rich-resource languages for languages with no annotated resources.
- Presented an active learning algorithm for quickly finding informative samples from unlabeled data in order to fast improve the performance of our model.

**Knowledge Engineering Group (KEG), Tsinghua University****Beijing, China**

Research Assistant, advised by Jie Tang

Jun 2018 - Jul 2020

- Constructed the AMiner chatbot using BiLSTM-CRF-NER model and LSTM classifier, and assisted users to define question rules with the interactive visualized syntax tree.
- A concept representation learning as final year project.

**Compute Intelligence Lab, Nanyang Technological University****Singapore**

Research Assistant, advised by Yiping Ke

Jul 2019 - Sep 2019

- Constructed a graph using the knowledge, self-learned the construction feature from the graph through GNN, and combined the GNN output with the origin encoder in order to improve the dialog agent.
- Conducted tasks of TAS-LSTM and strengthened the trajectory prediction effect with the information of graph format.

**Big Data Mining Team, Microsoft Research Asia (MSRA)****Beijing, China**

Research Intern, advised by Börje Karlsson

Mar 2019 - Jun 2019

- Devised and developed the intelligent assistant Enterprise Deep Intelligence (EDI).
- Completed dialog management of the system with C#.

**CONFERENCE/JOURNAL REFEREE**

- AAAI Conference on Artificial Intelligence (AAAI), 2024
- Neural Networks, 2023
- Engineering Applications of Artificial Intelligence (EAAI), 2022
- Memetic Computing (MEME), 2021

**COMMUNITY & ORGANIZATION EXPERIENCE****Student Union of Software School, Beihang University****Beijing, China**

Position: Minister

Jul 2017 - Jul 2019

- Worked on building the strong bonds between the contact agency and the company to provide financial support for various activities of the college and to cooperate with other school colleges.
- Participated in and worked as one of the core organizing staffs for the 2017 Amethyst Ten School Ballroom and the Microsoft Asia Academy Internship Sharing Session.

**HP Dream Works****Beijing, China**

Position: Campus Captain

Jul 2017 - Jul 2019

- Hosted HP Campus Engineer Training Program, participated in HP product research, and worked in two "HP Service Day" events.

**HONORS & AWARDS**

- Software College Innovation and Entrepreneurship Scholarship 2019
- Software College Excellent Student Leader Award 2019
- Yuanhang Undergraduate Summer Overseas Research Scholarship 2019
- 3rd Prize of the 29th Feng Ru Cup Science and Technology Competition 2019
- Software College Innovation and Entrepreneurship Scholarship 2018
- 3rd Prize of the 28th Feng Ru Cup Science and Technology Competition 2018
- Software College Excellent Student Leader Award 2017