

JIASHUO LIU

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EDUCATION

Tsinghua University

Bachelor of Computer Science and Technology(Top 6%)

Excellent graduate of Tsinghua University, 2020

Excellent graduate of Department of Computer Science and Technology, Tsinghua University, 2020

Tsinghua University

Phd. Student Advised by Prof. Peng Cui

All major courses scored 4.0/4.0

Sep. 2016 – June 2020

Beijing, China

Sep. 2020 – Present

Beijing, China

RESEARCH INTERESTS

Out-of-Distribution (OOD) Generalization Problem

I am working to develop algorithms with stable performances under agnostic distributional shifts, including Distributionally Robust Optimization methods and Invariant Learning methods. And I am now the maintainer of the OOD generalization paper list on page <http://out-of-distribution-generalization.com> (1.5k+ Pageviews).

Machine Learning and Causal Inference for Biology

with BGI Big Data Center

I am working to incorporate causal inference into machine learning to develop explainable and trustworthy algorithms for analysis of Single-Cell RNA Sequence data on COVID-20 and Alzheimer's Disease.

PUBLICATIONS

Conference Papers | Accepted Conference Papers

1. **Jiashuo Liu**, Zheyang Shen, Peng Cui, Linjun Zhou, Kun Kuang, Bo Li, and Yishi Lin. Stable adversarial learning under distributional shifts. In *Thirty-Fifth AAAI Conference on Artificial Intelligence, AAAI 2021*, pages 8662–8670. AAAI Press, 2021
2. **Jiashuo Liu**, Zheyuan Hu, Peng Cui, Bo Li, and Zheyang Shen. Heterogeneous risk minimization. In Marina Meila and Tong Zhang, editors, *Proceedings of the 38th International Conference on Machine Learning, ICML 2021, 18-24 July 2021, Virtual Event*, volume 139 of *Proceedings of Machine Learning Research*, pages 6804–6814. PMLR, 2021
3. Zheyang Shen, Peng Cui, **Jiashuo Liu**, Tong Zhang, Bo Li, and Zhitang Chen. Stable learning via differentiated variable decorrelation. In *KDD '20: The 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Virtual Event, CA, USA, August 23-27, 2020*, pages 2185–2193. ACM, 2020
4. Haoxin Liu, Ziwei Zhang, Peng Cui, Yafeng Zhang, Qiang Cui, **Jiashuo Liu**, and Wenwu Zhu. Signed graph neural network with latent groups. In *KDD '21: The 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Virtual Event, Singapore, August 14-18, 2021*, pages 1066–1075. ACM, 2021
5. **Jiashuo Liu**, *. *. *. *. *. *. *. (Currently under review in *NeurIPS 2021*, not published yet.)

Journal Papers | Currently Under Review

1. **Jiashuo Liu**, Zheyang Shen, Peng Cui, Linjun Zhou, Kun Kuang, and Bo Li. Distributionally robust learning with stable adversarial training. *CoRR*, abs/2106.15791, 2021.(Submitted to *IEEE TKDE*)
2. Zheyang Shen*, **Jiashuo Liu***, Yue He, Xingxuan Zhang, Renzhe Xu, Han Yu, and Peng Cui. Towards out-of-distribution generalization: A survey. *CoRR*, abs/2108.13624, 2021(*:Equal Contributions, Submitted to *IEEE TPAMI*)
3. Chongxuan Li, Kun Xu, **Jiashuo Liu**, Jun Zhu, and Bo Zhang. Triple generative adversarial networks. *CoRR*, abs/1912.09784, 2019.(Submitted to *IEEE TPAMI*)

TEACHING & ACADEMIC SERVICE

- 2019 Fall TA Software Engineering, Instructed by Prof. Xiaoying Bai
- 2020 Fall TA Software Engineering, Instructed by Prof. Dan Pei
- 2021 Fall TA Software Engineering, Instructed by Prof. Jianyong Wang
- Conference Reviewer: AAAI 2021

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, Matlab

Frameworks: PyTorch, TensorFlow