

刘家硕

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教育经历

清华大学 计算机科学与技术系

2020 年 9 月至今

博士研究生 GPA 3.97/4.0 (专业第三)

研究生国家奖学金, 2021

清华大学 计算机科学与技术系

2016 年 9 月—2020 年 7 月

本科 GPA 3.61/4.0 (专业前 6%)

清华大学计算机系优秀毕业生

清华大学优良毕业生

科研方向

分布外泛化问题 (Out-of-Distribution Generalization)

- 针对存在分布偏移下的机器学习模型泛化问题进行研究, 聚焦于提升机器学习模型的分布外泛化能力, 主要包含分布鲁棒优化 (Distributionally Robust Optimization) 与不变学习 (Invariant Learning)

数据异质性分析 (Heterogeneity Analysis)

- 分析混杂数据中的异质性, 并研究其与分布外泛化、算法公平性等问题的关系

基因组学研究 (Single-Cell RNA Sequence Data Analysis)

- 利用机器学习与因果推断方法研究外界扰动 (如: 干扰素、药物) 对于基因差异表达的影响, 并寻找新的细胞类型或状态

论文发表

会议论文

- Jiashuo Liu**, Zheyuan 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*
- Jiashuo Liu**, Zheyuan Hu, Peng Cui, Bo Li, and Zheyuan Shen. Heterogeneous risk minimization. In *Proceedings of the 38th International Conference on Machine Learning, ICML 2021*
- Jiashuo Liu**, Zheyuan Hu, Peng Cui, Bo Li, and Zheyuan Shen. Kernelized heterogeneous risk minimization. In *35th Conference on Neural Information Processing Systems, NeurIPS 2021*
- Zheyuan Shen, Peng Cui, **Jiashuo Liu**, Tong Zhang, Bo Li, and Zhitang Chen. Stable learning via differentiated variable decorrelation. In *26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD 2020*
- Haoxin Liu, Ziwei Zhang, Peng Cui, Yafeng Zhang, Qiang Cui, **Jiashuo Liu**, and Wenwu Zhu. Signed graph neural network with latent groups. In *27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD 2021*
- Zimu Wang, Yue He, **Jiashuo Liu**, Wenchao Zou, Philip Yu, Peng Cui. Invariant Preference Learning for General Debiasing in Recommendation. In *28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, KDD 2022*

期刊论文

- Chongxuan Li, Kun Xu, Jun Zhu, **Jiashuo Liu** and Bo Zhang. Triple Generative Adversarial Networks. *Transactions on Pattern Analysis and Machine Intelligence, TPAMI*

审阅中论文

- Jiashuo Liu**, Jiayun Wu, Jie Peng, Zheyuan Shen, Bo Li and Peng Cui. Distributionally Invariant Learning: Rationalization and Practical Algorithms
- Jiashuo Liu**, Zheyuan Shen, Peng Cui, Linjun Zhou, Kun Kuang, Bo Li and Yishi Lin. Distributionally Robust Learning with Stable Adversarial Training
- Zheyuan Shen*, **Jiashuo Liu***, Yue He, Xingxuan Zhang, Renzhe Xu, Han Yu, Peng Cui. Towards Out-of-Distribution Generalization: A Survey. (*: Equal Contributions)
- Xingxuan Zhang, Zekai Xu, Renzhe Xu, **Jiashuo Liu**, Peng Cui, Weitao Wan, Chong Sun, Chen Li. Towards Domain Generalization in Object Detection

教学&学术服务

- 清华大学计算机系软件工程课程助教: 2019 秋、2020 秋、2021 秋、2022 春
- 学术会议审稿: AAAI 2022, CVPR 2022, IJCAI 2022, ICML 2022, UAI 2022