傅炜杰

主页: https://fuweijie.github.io
邮箱: fwj.edu@gmail.com
电话:186-5655-6851

教育经历

09/2015 ~05/2021	**硕博连读, 计算机与信息学院, 合肥工业大学** 专业: 信号与信息处理 导师: 汪萌教授
09/2011 ~ 06/2015	**本科, 计算机与信息学院, 合肥工业大学** 专业: 电子信息工程 导师: 汪萌教授，郝世杰副教授

访学经历

03/2019 ~ 07/2020	**计算科学与工程学院，德州 A&M 大学, 美国** 研究内容: 深度学习的可解释性和鲁棒性，成果以一作发表于 IEEE 汇刊 TPAMI 合作导师: 胡侠副教授
11/2016 ~ 03/2017	**计算机科学学院，曼彻斯特大学, 英国** 研究内容: 大规模机器学习算法探索，成果以一作发表于 IEEE 汇刊 TBD 合作导师: 穆婷婷博士

研究背景

深度学习的可靠性，特别是卷积神经网络的可解释性/鲁棒性
机器学习的高效算法，特别是基于图模型的无监督学习/半监督学习/主动学习

论文成果

- 包含 TPAMI/TKDE/ KDD 在内的一作或二作(导师一作) CCF A 类论文 5 篇
- 截止 2021.01.31, 谷歌学术被引用次数 240+, h-index=5

■ 深度学习的可靠性研究部分

TPAMI **Weijie Fu**, Meng Wang, Mengnan Du, Ninghao Liu, Shijie Hao, Xia Hu, Differentiated Explanation of Deep Networks with Skewed Distributions, IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021.
→提出了一种无参、实时的针对深度卷积神经网络的决策解释方法.

Under Review Mengnan Du, Ruixiang Tang, **Weijie Fu**, Xia Hu, A Simple Framework for Bias Mitigation via Feature Influence, Under Review.
→提出了利用课程学习中教师网络的公平性分析来提升学生网络公平性的训练算法.

Under Review Raj Vardhan, Ninghao Liu, **Weijie Fu**, Guofei Gu, Explanation Based Detection of Adversarial Examples, Under Review.
→提出了基于决策解释集成的攻击样本检测技术.

■ 机器学习的高效算法研究部分

TKDE Meng Wang (导师), **Weijie Fu**, Xiangnan He, Shijie Hao, Xindong Wu, A Survey on Large-Scale Machine Learning, IEEE Transactions on Knowledge and Data Engineering, 2020.
→从模型复杂度/优化效率/计算并行化三个角度讨论了大规模机器学习领域的相关工作.

Access Wei Qin, Zhenzhen Hu, Xueliang Liu, **Weijie Fu**, Jun He, Richang Hong, The Balanced Loss Curriculum Learning, IEEE Access, 2020.
→提出了利用教师网络进行学生网络实时知识蒸馏的自适应算法.

MMM Hengtong, Hu, Richang Hong, **Weijie Fu**, Meng Wang, Efficient Graph Based Multi-view Learning. International Conference on MultiMedia Modeling, 2019.
→提出了基于锚图模型的多图学习算法，实现了高效的多视角信息融合.

KDD **Weijie Fu**, Meng Wang, Shijie Hao, Xindong Wu, Scalable Active Learning by Approximated Error Reduction, ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2018.
→提出了一种具有明确物理意义的快速样本选择策略, 即近似期望误差下降.

TBD **Weijie Fu**, Meng Wang, Shijie Hao, Tingting Mu, FLAG: Faster Learning on Anchor Graph with Label Predictor Optimization, IEEE Transactions on Big Data, 2017.
→提出了层次化锚图模型分类器的改进算法，实现了 8 百万样本在 2 分钟内的高效准确分类.

TKDE Meng Wang (导师), **Weijie Fu**, Shijie Hao, Xindong Wu, Learning on Big Graph: Label Inference and Regularization with Anchor Hierarchy, IEEE Transactions on Knowledge and Data Engineering, 2017.
→提出了层次化锚图模型，在单机上实现了 8 百万样本的高效分类.

TKDE	Meng Wang (导师), **Weijie Fu**, Shijie Hao, Dacheng Tao, Xindong Wu, Scalable Semi-Supervised Learning by Efficient Anchor Graph Regularization, IEEE Transactions on Knowledge and Data Engineering, 2016.
	→提出了快速的非负局部权重计算方法，实现了在非负约束下的重构误差最小化问题的快速求解.
Neurocomputing	**Weijie Fu**, Shijie Hao, Meng Wang, Active learning on Anchor Graph with an Improved Transductive Experimental Design, Neurocomputing, 2016.
	→提出了利用锚图中锚点分布的快速主动学习算法.
Neurocomputing	Jiang Rui, **Weijie Fu**, Shijie Hao, Li Wen, Richang Hong, Dimensionality Reduction on Anchor Graph with an Efficient Locality Preserving Projection, Neurocomputing, 2016.
	→提出了利用锚图低秩结构进行无监督降维的高效算法.

应邀报告

伦敦	Scalable Active Learning by Approximated Error Reduction, Oral, KDD, 2018.

学术服务

-	担任多个国际知名会议和期刊审稿人
会议	European Conference on Computer Vision, 2021
	AAAI Conference on Artificial Intelligence, 2021
	IEEE Conference on Computer Vision and Pattern Recognition, 2021
	ACM SIGIR Conference on Research and Development in Information Retrieval, 2020
	ACM International Conference on Multimedia, 2020
	Pacific-Rim Conference on Multimedia, 2018
	International Conference on MultiMedia Modeling, 2017
	ACM International Conference on Multimedia Retrieval, 2016
期刊	IEEE Transactions on Knowledge and Data Engineering
	IEEE Transactions on Neural Networks and Learning Systems
	IEEE Transactions on Circuits and Systems for Video Technology
	IEEE Transactions on Big Data
	Multimedia Tools and Applications
	Neurocomputing

主要奖项

2018	国家留学基金委公派奖学金
2018	研究生国家奖学金
2018	SIGKDD 学生国际旅行资助奖
2015	合肥工业大学优秀毕业论文
2015-2019	合肥工业大学研究生一等奖学金

兴趣爱好

长跑

登山