



汇报

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- 深度学习中的难例 (hard sample) 相关^{21 22}

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²¹Jia, Y., Gao, J., Huang, W., Yuan, Y., & Wang, Q.. Exploring Hard Samples in Multi-View for Few-Shot Remote Sensing Scene Classification. 2023. TRGS.

²²Cui, P., Zhang, D., Deng, Z., Dong, Y., & Zhu, J.. Learning Sample Difficulty from Pre-trained Models for Reliable Prediction. 2023. arXiv.



- (Dataset, DataLoader) 锂离子电池数据集整理与数据预处理
https://github.com/hilinxinhui/lib_ds_toolkits
- (RUL) 自回归-卷积神经网络-长短期神经网络 (ST dependencies) 框架
<https://github.com/hilinxinhui/auto-cnn-lstm>
- (SOH) 时序-传感器 (ST dependencies) 双分支 Transformer 框架
<https://github.com/hilinxinhui/dast.git>
- (RUL, 工况) 基于 Transformer 的多任务框架
https://github.com/hilinxinhui/multi_task_lib/tree/main
- (RUL, 工况) 基于 Transformer 的多任务框架 (改进位置编码, 引入贝叶斯方法修正任务损失函数系数)
https://github.com/hilinxinhui/multi_task_lib/tree/dev
- (SOH) 层次迁移学习-通道注意力框架
https://github.com/hilinxinhui/tl_lib_phm.git
- (SOH) 全连接图神经网络 (FCGNN for DEDT) 框架
https://github.com/hilinxinhui/gnn_lib_phm

- 贝叶斯深度学习
模型估计/预测结果的不确定性估计、模型幻觉、硬样本/难例判定
- 迁移学习
多工况混合情形的迁移学习、图迁移学习
- 模型压缩
知识蒸馏、agent 注意力机制、全连接图神经网络“剪枝”
- 电池组健康状态估计和剩余寿命预测
电池组数据集缺乏、电池组健康状态/剩余寿命定义模糊
- 电池荷电状态估计 (SOC)、电化学阻抗谱 (EIS) 预测和健康状态-荷电状态联合估计框架
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