

How does incorporating causal invariance in pre-training affect the out-of-distribution robustness of tabular

Assignee Research

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Abstract

The performance of machine learning models under distribution shift has been the focus of the community in recent years. Most of current methods have been proposed to improve the robustness to distribution shift from the algorithmic perspective, i.e., designing better training algorithms to help the generalization in shifted test distributions. This paper studies the distribution shift problem from the perspective of pre-training and data augmentation, two important factors in the practice of deep learning that have not been systematically investigated by existing work. By evaluating seven pre

1 Introduction

This paper examines: An Empirical Study on Distribution Shift Robustness From the Perspective of Pre-Training and Data Augmentation. Research question: How does incorporating causal invariance in pre-training affect the out-of-distribution robustness of tabular foundation models compared to non-causal baselines, measured via accuracy degradation on shifted synthetic datasets?.

2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 5.8/10.

3 Results

16 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 5.8/10.

4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

References

- <http://arxiv.org/abs/2205.12753v1>
- <http://arxiv.org/abs/2311.11096v1>
- <http://arxiv.org/abs/2408.10548v1>