Cross-Domain vs. Domain-Specific Fine-Tuning in EchoMind-Enhanced OpenPangu-7B-MLA for Emotional Alignment

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June 8, 2026

Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: How does the cross-domain adaptation of EchoMind-trained OpenPangu-7B-MLA models compare to domain-specific fine-tuned models in terms of emotional alignment scores on the MSP-Improv dataset. 13 claims were extracted from source literature; 2 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Why does my medical AI look at pictures of birds? Exploring the efficacy of transfer learning across domain boundaries. Research question: How does the cross-domain adaptation of EchoMind-trained OpenPangu-7B-MLA models compare to domain-specific fine-tuned models in terms of emotional alignment scores on the MSP-Improv dataset?.

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 4.5/10.

3 Results

16 papers retrieved. 13 claims extracted; 2 independently verified. Quality review score: 4.5/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
Pretraining on any dataset yields some degree of improved performance in almost every fine-tuning scenario tested.	×	0.05
Intra-domain transfer learning generally offers equal or slightly improved performance compared to cross-domain transfer	✓	0.17
The intra-domain advantage grows substantially when the complexity of the task is increased by reducing the number of im	×	0.07
Pretraining on RadNet (R-1.28M) followed by linear evaluation on RadNet offers a statistically less significant and smal	×	0.08
The asymmetry in performance gain intensifies substantially during linear evaluation or for increasing task complexity.	×	0.05
The ImageNet-pretrained model displays competitive performance in most experiments.	×	0.07
RadNet-1.28M pretraining yields slightly superior or comparable performance on RadNet and LiTS (both CT imaging datasets	×	0.06
RadNet-pretrained models slightly outperform ImageNet-pretrained models in liver segmentation but not in tumor segmentat	×	0.08
An increase in the scale of available pretraining data almost universally significantly improves transfer performance of	×	0.12
Intra-domain transfer leads to increased feature reuse compared to cross-domain transfer.	✓	0.15
Feature reuse after RadNet pretraining is higher than after ImageNet pretraining when fine-tuning on RadNet-1.28M.	×	0.09
Feature reuse is higher when pretraining happens on ImageNet and fine-tuning on RadNet-1.28M compared to pretraining on	×	0.08
Intra-domain transfer leads to the development of unique features and mechanisms.	×	0.11

References

- http://arxiv.org/abs/2306.17555v2

- http://arxiv.org/abs/2201.01002v1
- http://arxiv.org/abs/2201.01003v1