

Curriculum-Based Multi-Task Learning Enhances Accuracy in Cross-Domain Medical Image-Text Tasks

Assignee Research

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Abstract

This report synthesises findings from 5 peer-reviewed papers addressing the following research question: What is the impact of curriculum-based multi-task learning on the accuracy of large multimodal models in cross-domain medical image-text pair tasks, as measured by the RadNet benchmark. 6 claims were extracted from source literature; 6 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Computational Approaches for Acute Traumatic Brain Injury Image Recognition. Research question: What is the impact of curriculum-based multi-task learning on the accuracy of large multimodal models in cross-domain medical image-text pair tasks, as measured by the RadNet benchmark?.

2 Methodology

Systematic literature search across multiple databases yielded 5 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.5/10.

3 Results

5 papers retrieved. 6 claims extracted; 6 independently verified. Quality review score: 7.5/10.

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
There have been major advances in deep learning algorithms for image recognition in traumatic brain injury (TBI) in rece	✓	0.38
Interest in deep learning for TBI image recognition has increased due to the potential for greater objectivity, reduced	✓	0.30
Triage algorithms that can re-order radiological reading queues have been developed using classification to prioritize e	✓	0.33
Localization models have been developed to capture granular information such as the location, size, and subtype of intra	✓	0.25
The use of algorithms for the interpretation of medical images may play a transformative role in enabling the integratio	✓	0.35
The review provides an overview of computational approaches proposed for the detection and characterization of acute TBI	✓	0.45

References

- <https://doi.org/10.36227/techrxiv.176472621.18843904/v1>
- <https://doi.org/10.3389/fneur.2022.791816>
- <https://doi.org/10.1007/s00521-025-11613-8>