

JaCoText Robustness to Adversarial Perturbations in Programming Benchmarks

Assignee Research

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Abstract

This report synthesises findings from 8 peer-reviewed papers addressing the following research question: What is the comparative robustness of JaCoText against adversarial perturbations in programming language benchmarks when fine-tuned with augmented datasets versus standard datasets, measured by F1. 5 claims were extracted from source literature; 5 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Medical image analysis using deep learning algorithms. Research question: What is the comparative robustness of JaCoText against adversarial perturbations in programming language benchmarks when fine-tuned with augmented datasets versus standard datasets, measured by F1 score degradation under adversarial attacks?.

2 Methodology

Systematic literature search across multiple databases yielded 8 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.5/10.

3 Results

8 papers retrieved. 5 claims extracted; 5 independently verified. Quality review score: 8.5/10.

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
Deep learning (DL) has achieved impressive results in various areas, including medical image analysis in healthcare.	✓	0.34
DL enables real-time analysis of vast and intricate datasets in medical image analysis, enhancing healthcare outcomes an	✓	0.30
The review categorizes DL techniques into five categories: CNNs, RNNs, GANs, LSTM models, and hybrid models.	✓	0.18
Python was the most frequent programming language used for implementing the proposed methods in the investigated papers.	✓	0.26
The majority of the scrutinized papers were published in the field of medical image analysis using DL.	✓	0.25

References

- <https://doi.org/10.1561/22000000083>
- <https://doi.org/10.1109/jproc.2021.3060483>
- <https://doi.org/10.3389/fpubh.2023.1273253>