Synonym Substitution Attacks on CodeT5 and JaCoText: Fix Rates and Grammatical Validity

Assignee Research

June 7, 2026

Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: How do different synonym substitution attack methods compare in terms of their impact on the correct fix rates of CodeT5 and JaCoText on the QuixBugs benchmark when evaluated against grammatical. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Bridging Robustness and Generalization Against Word Substitution Attacks in NLP via the Growth Bound Matrix Approach. Research question: How do different synonym substitution attack methods compare in terms of their impact on the correct fix rates of CodeT5 and JaCoText on the QuixBugs benchmark when evaluated against grammatical validity constraints?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.7/10.

3 Results

15 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.7/10.

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/2507.10330v1
- http://arxiv.org/abs/2502.04173v1
- http://arxiv.org/abs/2008.03709v4