

Synthetic Obfuscated Vulnerability Patterns and Robustness in Sub-10B Language Models

Assignee Research

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Abstract

This report synthesises findings from 14 peer-reviewed papers addressing the following research question: How does the addition of synthetic obfuscated vulnerability patterns in mixed-language corpora during fine-tuning affect the robustness of sub-10B LLMs, as evaluated by F1 score degradation on a. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 5.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Fine-Tuning Code Language Models to Detect Cross-Language Bugs. Research question: How does the addition of synthetic obfuscated vulnerability patterns in mixed-language corpora during fine-tuning affect the robustness of sub-10B LLMs, as evaluated by F1 score degradation on a cross-language bug detection benchmark with increasing obfuscation levels?.

2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 5.3/10.

3 Results

14 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 5.3/10.

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/2507.21954v2>
- <http://arxiv.org/abs/2508.11281v3>
- <http://arxiv.org/abs/2604.23361v1>