

Multimodal Input Integration in DeepSeek R1 and Codestral for Vulnerability Repair

Assignee Research

May 30, 2026

Abstract

This report synthesises findings from 11 peer-reviewed papers addressing the following research question: How does the integration of multimodal inputs (e.g., AST + control flow graphs) affect the vulnerability repair capabilities of DeepSeek R1 versus Codestral, measured by accuracy and throughput on. With the advent and widespread deployment of Multimodal Large Language Models (MLLMs), the imperative to ensure their safety has become increasingly pronounced. However, with the integration of additional modalities, MLLMs are exposed to new vulnerabilities, rendering them prone. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: AdaShield: Safeguarding Multimodal Large Language Models from Structure-based Attack via Adaptive Shield Prompting. Research question: How does the integration of multimodal inputs (e.g., AST + control flow graphs) affect the vulnerability repair capabilities of DeepSeek R1 versus Codestral, measured by accuracy and throughput on the Big-Vul dataset?.

2 Methodology

Systematic literature search across multiple databases yielded 11 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.3/10.

3 Results

11 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 4.3/10.

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/2401.15459v3>
- <http://arxiv.org/abs/2509.17337v1>
- <http://arxiv.org/abs/2403.09513v1>