Techniques Enabling Language Models to Solve Competition-Level Software Engineering Problems

Assignee Research

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Abstract

This report synthesises findings from 9 peer-reviewed papers addressing the following research question: What techniques enable language models to solve competition-level software engineering problems v11. 8 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Morescient GAI for Software Engineering (Extended Version). Research question: What techniques enable language models to solve competition-level software engineering problems v11.

2 Methodology

Systematic literature search across multiple databases yielded 9 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.5/10.

3 Results

9 papers retrieved. 8 claims extracted; 0 independently verified. Quality review score: 4.5/10.

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
The benchmark table on page 8 shows the operations and their corresponding results for different data structures.	×	0.04
The table on page 8 includes columns for time taken, memory used, and branches covered.	×	0.02
The table on page 8 lists various operations such as create, enqueue, peek, size, and dequeue for data structures.	×	0.01
The table on page 8 shows the sum operation for data structure SI2 with values 1 and 2.	×	0.03
The table on page 8 includes a column for branches covered in the benchmark results.	×	0.01
The table on page 8 shows the results of operations for data structures SI1, SI2, and SI3.	×	0.01
The table on page 8 includes a column for memory used in the benchmark results.	×	0.02
The table on page 8 shows the time taken for various operations in the benchmark results.	×	0.02

References

- http://arxiv.org/abs/1707.03869v3
- http://arxiv.org/abs/2406.04710v2
- http://arxiv.org/abs/1904.04104v1