Multimodal vs. Text-Only Models in ICPC Pass@1 Performance and Scaling Behavior

Assignee Research

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Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: How do multimodal models (combining code and natural language inputs) compare to text-only models in pass@1 performance on ICPC World Finals problems in the HLCE benchmark, and what scaling behavior. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: LLM-ProS: Analyzing Large Language Models' Performance in Competitive Problem Solving. Research question: How do multimodal models (combining code and natural language inputs) compare to text-only models in pass@1 performance on ICPC World Finals problems in the HLCE benchmark, and what scaling behavior emerges when varying model size?.

2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.0/10.

3 Results

16 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 4.0/10.

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/2510.01845v1
- http://arxiv.org/abs/2509.17337v1
- http://arxiv.org/abs/2502.04355v1