VLA-Adapter Computational Efficiency in Small Vision-Language-Action Models

Assignee Research

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Abstract

This report synthesises findings from 9 peer-reviewed papers addressing the following research question: To what extent does VLA-Adapter maintain computational efficiency compared to full fine-tuning when applied to smaller VLAs (e.g., 1B parameters) on RoboBench, as measured by inference latency and. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Task-Specific Efficiency Analysis: When Small Language Models Outperform Large Language Models. Research question: To what extent does VLA-Adapter maintain computational efficiency compared to full fine-tuning when applied to smaller VLAs (e.g., 1B parameters) on RoboBench, as measured by inference latency and throughput per task?.

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 7.2/10.

3 Results

9 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 7.2/10.

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/2603.21389v1
- http://arxiv.org/abs/2606.01947v1
- http://arxiv.org/abs/2110.06500v2