

Test-Time Compute Scaling Strategies and Adversarial Robustness in InternVL 2.5 on ChartQA

Assignee Research

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Abstract

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: What is the impact of test-time compute scaling strategies on the robustness of InternVL 2.5 against adversarial perturbations in the ChartQA dataset. 9 claims were extracted from source literature; 9 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 9.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Gemini 1.5: Unlocking multimodal understanding across millions of tokens of context. Research question: What is the impact of test-time compute scaling strategies on the robustness of InternVL 2.5 against adversarial perturbations in the ChartQA dataset?.

2 Methodology

Systematic literature search across multiple databases yielded 12 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 9.2/10.

3 Results

12 papers retrieved. 9 claims extracted; 9 independently verified. Quality review score: 9.2/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
Gemini 1.5 models achieve near-perfect recall on long-context retrieval tasks across modalities.	✓	0.32
Gemini 1.5 models improve the state-of-the-art in long-document QA, long-video QA and long-context ASR.	✓	0.33
Gemini 1.5 models match or surpass Gemini 1.0 Ultra’s state-of-the-art performance across a broad set of benchmarks.	✓	0.26
Gemini 1.5 models show continued improvement in next-token prediction and near-perfect retrieval (>99%) up to at least 1	✓	0.28
Gemini 1.5 models represent a generational leap over existing models such as Claude 3.0 (200k) and GPT-4 Turbo (128k).	✓	0.21
Gemini 1.5 Pro exceeds the February version on the great majority of capabilities and benchmarks.	✓	0.24
Gemini 1.5 Flash is a more lightweight variant designed for efficiency with minimal regression in quality.	✓	0.23
Gemini 1.5 models achieve 26 to 75% time savings across 10 different job categories when collaborating with professional	✓	0.27
Gemini 1.5 models can learn a grammar manual for Kalamang, a language with fewer than 200 speakers worldwide.	✓	0.21

References

- <https://doi.org/10.32388/gxr68q>
- <https://doi.org/10.48550/arxiv.2412.05271>

- <https://doi.org/10.48550/arxiv.2403.05530>