Gemini 1.5 Flash Accuracy on Multimodal Software Engineering Benchmarks with Interleaved Video and Code Contexts

Assignee Research

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Abstract

This report synthesises findings from 11 peer-reviewed papers addressing the following research question: How does interleaving long video sequences with code documentation affect Gemini 1.5 Flash's accuracy on multimodal software engineering benchmarks compared to text-only contexts. 6 claims were extracted from source literature; 5 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Large Language Models: A Comprehensive Survey of its Applications, Challenges, Limitations, and Future Prospects. Research question: How does interleaving long video sequences with code documentation affect Gemini 1.5 Flash's accuracy on multimodal software engineering benchmarks compared to text-only contexts?.

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 7.5/10.

3 Results

11 papers retrieved. 6 claims extracted; 5 independently verified. Quality review score: 7.5/10.

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
Large Language Models (LLMs) are a type of artificial intelligence (AI).	✓	0.22
LLMs are used for natural language processing (NLP), machine translation, vision applications, and question-answering.	✓	0.27
The survey discusses the fundamental concepts of generative AI and the architecture of generative pre-trained transforme	✓	0.22
The survey covers the history, evolution, and training methods of LLMs.	×	0.13
The survey discusses LLM applications in medicine, education, finance, engineering, media, entertainment, politics, and	✓	0.20
The survey explores challenges associated with deploying LLMs, including ethical considerations, model biases, interpret	✓	0.27

References

- https://doi.org/10.36227/techrxiv.23589741.v8
- https://doi.org/10.3390/bdcc9120320
- https://doi.org/10.54394/hetp0387