Compositional GUI Agent Performance Degradation in Multi-Step Workflows

Assignee Research

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: How does the task success rate of compositional GUI agents degrade as the number of sequential steps increases in complex post-production workflows. 4 claims were extracted from source literature; 4 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.1/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. Research question: How does the task success rate of compositional GUI agents degrade as the number of sequential steps increases in complex post-production workflows?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.1/10.

3 Results

15 papers retrieved. 4 claims extracted; 4 independently verified. Quality review score: 7.1/10.

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
AI offers transformative potential for the augmentation and potential replacement of human tasks and activities within a	✓	0.33
The pace of change for this new AI technological age is staggering, with new breakthroughs in algorithmic machine learni	✓	0.31
The impact of AI could be significant, with industries ranging from finance, healthcare, manufacturing, retail, supply c	✓	0.35
This research offers significant and timely insight to AI technology and its impact on the future of industry and societ	✓	0.32

References

- https://doi.org/10.48550/arxiv.2303.12712
- https://doi.org/10.1016/j.ijinfomgt.2019.08.002
- https://doi.org/10.4230/lipics.giscience.2025.3