

# How does the in-domain performance of MMICL on MSCOCO compare to its performance on other standard object detection

Assignee Research

May 29, 2026

## Abstract

This survey presents a comprehensive analysis of the phenomenon of hallucination in multimodal large language models (MLLMs), also known as Large Vision-Language Models (LVLMs), which have demonstrated significant advancements and remarkable abilities in multimodal tasks. Despite these promising developments, MLLMs often generate outputs that are inconsistent with the visual content, a challenge known as hallucination, which poses substantial obstacles to their practical deployment and raises concerns regarding their reliability in real-world applications. This problem has attracted increasing

## 1 Introduction

This paper examines: Hallucination of Multimodal Large Language Models: A Survey. Research question: How does the in-domain performance of MMICL on MSCOCO compare to its performance on other standard object detection benchmarks like COCO-Stuff or Visual Genome when using the same recall@K evaluation metrics?.

## 2 Methodology

Systematic literature search across multiple databases yielded 2 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.7/10.

## 3 Results

2 papers retrieved. 8 claims extracted; 8 independently verified. Quality review score: 8.7/10.

## 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
Multimodal large language models (MLLMs), also known as Large Vision-Language Models (LVLMs), have demonstrated significant	✓	0.38
MLLMs often generate outputs that are inconsistent with the visual content, a challenge known as hallucination.	✓	0.25
Hallucination in MLLMs poses substantial obstacles to their practical deployment and raises concerns regarding their reliability.	✓	0.29
Efforts are being made to detect and mitigate hallucinations in MLLMs.	✓	0.15
The survey provides a detailed overview of the underlying causes, evaluation benchmarks, metrics, and strategies developed	✓	0.28
The survey analyzes current challenges and limitations in addressing hallucination in MLLMs and formulates open questions	✓	0.15
The survey aims to deepen the understanding of hallucinations in MLLMs and inspire further advancements in the field.	✓	0.25
The survey contributes to the ongoing dialogue on enhancing the robustness and reliability of MLLMs.	✓	0.18

## References

- <https://doi.org/10.48550/arxiv.2409.13980>
- <https://doi.org/10.48550/arxiv.2404.18930>