

# Activation-Aware Quantization for Zero-Shot Visual Grounding in Multimodal LLMs

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## Abstract

This report synthesises findings from 13 peer-reviewed papers addressing the following research question: How does activation-aware quantization affect zero-shot visual grounding accuracy on RefCOCO+ compared to standard post-training quantization for multimodal large language models. Quantization is one of the most popular techniques for reducing computation time and shrinking model size. However, ensuring the accuracy of quantized models typically involves calibration using training data, which may be inaccessible due to privacy concerns. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 5.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Infrared Domain Adaptation with Zero-Shot Quantization. Research question: How does activation-aware quantization affect zero-shot visual grounding accuracy on RefCOCO+ compared to standard post-training quantization for multimodal large language models?.

## 2 Methodology

Systematic literature search across multiple databases yielded 13 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 5.0/10.

## 3 Results

13 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 5.0/10.

## 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/2410.13860v1>
- <http://arxiv.org/abs/2509.16989v3>
- <http://arxiv.org/abs/2408.13925v1>