Quantization Noise Sensitivity in Scaled Vision-Language Models on CLIP and ALIGN Benchmarks

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Abstract

This report synthesises findings from 8 peer-reviewed papers addressing the following research question: What is the impact of model scaling on quantization noise sensitivity for vision-language models during inference, measured through CLIP and ALIGN benchmark performance. Contrastive language-image pretraining (CLIP) links vision and language modalities into a unified embedding space, yielding the tremendous potential for vision-language (VL) tasks. While early concurrent works have begun to study this potential on a subset of tasks, important. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: CLIP-TD: CLIP Targeted Distillation for Vision-Language Tasks. Research question: What is the impact of model scaling on quantization noise sensitivity for vision-language models during inference, measured through CLIP and ALIGN benchmark performance?.

2 Methodology

Systematic literature search across multiple databases yielded 8 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.0/10.

3 Results

8 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.0/10.

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/2201.05729v3
- http://arxiv.org/abs/2410.01534v2
- http://arxiv.org/abs/2505.14302v1