

# Dynamic Sample Reweighting in CLIP Pretraining for Robust Zero-Shot Image-Text Retrieval

Assignee Research

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## Abstract

This report synthesises findings from 8 peer-reviewed papers addressing the following research question: How does dynamic sample reweighting during contrastive pretraining impact the zero-shot image-text retrieval accuracy of CLIP models on COCO and Flickr30K under joint adversarial perturbations. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 5.9/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: COCO-DR: Combating Distribution Shifts in Zero-Shot Dense Retrieval with Contrastive and Distributionally Robust Learning. Research question: How does dynamic sample reweighting during contrastive pretraining impact the zero-shot image-text retrieval accuracy of CLIP models on COCO and Flickr30K under joint adversarial perturbations?.

## 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 5.9/10.

## 3 Results

8 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 5.9/10.

## 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/2502.06733v1>
- <http://arxiv.org/abs/2210.15212v2>
- <http://arxiv.org/abs/2402.18400v2>