

COCO-DR Continuous Contrastive Learning for Cross-Domain Multimodal Retrieval on Flickr30k

Assignee Research

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Abstract

Multimodal sarcasm detection aims to identify sarcasm in the given image-text pairs and has wide applications in the multimodal domains. Previous works primarily design complex network structures to fuse the image-text modality features for classification. However, such complicated structures may risk overfitting on in-domain data, reducing the performance in out-of-distribution (OOD) scenarios. Additionally, existing methods typically do not fully utilize cross-modal features, limiting their performance on in-domain datasets. Therefore, to build a more reliable multimodal sarcasm detection mo

1 Introduction

This paper examines: Leveraging Generative Large Language Models with Visual Instruction and Demonstration Retrieval for Multimodal Sarcasm Detection. Research question: Does the COCO-DR approach of continuous contrastive learning on target corpora improve cross-domain generalization for multimodal retrieval on Flickr30k relative to in-distribution performance?.

2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.5/10.

3 Results

14 papers retrieved. 7 claims extracted; 7 independently verified. Quality review score: 8.5/10.

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 sarcasm detection aims to identify sarcasm in the given image-text pairs and has wide applications in the mul	✓	0.43
Previous works primarily design complex network structures to fuse the image-text modality features for classification.	✓	0.35
Such complicated structures may risk overfitting on in-domain data, reducing the performance in out-of-distribution (OOD	✓	0.32
Existing methods typically do not fully utilize cross-modal features, limiting their performance on in-domain datasets.	✓	0.33
We propose a generative multimodal sarcasm model consisting of a designed instruction template and a demonstration retri	✓	0.46
We introduce an OOD test set, RedEval.	✓	0.23
Experimental results demonstrate that our method is effective and achieves state-of-the-art (SOTA) performance on the in	✓	0.38

References

- <https://www.semanticscholar.org/paper/ef224b1a0af6ef644bfb75c7193e967442b9a78c>
- <http://arxiv.org/abs/2503.08977v1>
- <http://arxiv.org/abs/2210.15212v2>