MELTR-Enhanced Flamingo vs CLIP Recall at K on Temporally Distorted Video Retrieval

Assignee Research

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: How does the Recall@K of MELTR-integrated Flamingo compare to standard CLIP on temporally shuffled video sequences versus fully reversed sequences in cross-modal retrieval benchmarks. 16 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Reversed in Time: A Novel Temporal-Emphasized Benchmark for Cross-Modal Video-Text Retrieval. Research question: How does the Recall@K of MELTR-integrated Flamingo compare to standard CLIP on temporally shuffled video sequences versus fully reversed sequences in cross-modal retrieval benchmarks?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.7/10.

3 Results

15 papers retrieved. 16 claims extracted; 0 independently verified. Quality review score: 3.7/10.

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
The RTime dataset is split into training, validation, and testing subsets containing 18,537, 1,000, and 2,000 videos res	×	0.04
In the RTime dataset, raw videos and their reversed counterparts are ensured to be in the same subset.	×	0.06
The RTime-Origin test set contains 1,000 video-text pairs using only raw videos and excluding reversed videos.	×	0.08
The evaluation metrics used for Standard Video-Text Retrieval (RTime-Origin) are Recall at K (R@1, R@5, R@10).	×	0.13
The RTime-Hard setting uses both raw videos and their reversed counterparts with human-written captions.	×	0.13
The RTime-Binary task evaluates temporal understanding by requiring models to select the correct video or text from two	×	0.12
The evaluation metric for the RTime-Binary setting is Accuracy (Acc), where random selection yields 50%.	×	0.03
The RTime dataset contains 21,000 video clips and 210,000 sentences.	×	0.04
The average duration of video clips in the RTime dataset is 20.4 seconds.	×	0.04
The average sentence length in the RTime dataset is 20.2 words.	×	0.04
The total duration of the RTime dataset is 122 hours.	×	0.09
Internvideo2-1B achieved an R@1 score of 91.0 for Text-to-Video retrieval and 88.8 for Video-to-Text retrieval in the RT	×	0.12
Internvideo2-1B achieved an Accuracy of 54.5% for Text-to-Video and 54.2% for Video-to-Text in the RTime-Binary setting.	×	0.07
In the RTime-Hard setting, increasing the number of negative samples from 1 to 12 decreased the Text-to-Video R@1 score	×	0.08
In the ablation study on Positional Embeddings (PE), enabling PE increased the Text-to-Video R@1 score from 38.1 to 46.3	×	0.02
In the ablation study on scale, increasing training data from 1K to 2K decreased the Text-to-Video R@1 score from 47.3 t	×	0.04

References

- http://arxiv.org/abs/2412.19178v2
- http://arxiv.org/abs/2007.02503v1
- http://arxiv.org/abs/2603.02888v1