Hierarchical Temporal Ordering Losses Enhance Cross-Modal Video Retrieval Accuracy

Assignee Research

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Abstract

This report synthesises findings from 9 peer-reviewed papers addressing the following research question: Does integrating explicit temporal ordering losses improve cross-modal retrieval accuracy on reversed video sequences compared to standard pre-training methods. 4 claims were extracted from source literature; 4 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: HERO: Hierarchical Encoder for Video+Language Omni-representation Pre-training. Research question: Does integrating explicit temporal ordering losses improve cross-modal retrieval accuracy on reversed video sequences compared to standard pre-training methods?.

2 Methodology

Systematic literature search across multiple databases yielded 9 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

9 papers retrieved. 4 claims extracted; 4 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
HERO encodes multimodal inputs in a hierarchical structure, where local context of a video frame is captured by a Cross-	✓	0.43
HERO is jointly trained on HowTo100M and large-scale TV datasets to gain deep understanding of complex social dynamics w	✓	0.33
HERO achieves new state of the art on multiple benchmarks over Text-based Video/Video-moment Retrieval, Video Question A	✓	0.44
HERO introduces two new challenging benchmarks How2QA and How2R for Video QA and Retrieval, collected from diverse video	✓	0.31

References

- https://doi.org/10.18653/v1/2020.emnlp-main.161
- https://doi.org/10.1186/s40537-021-00444-8
- https://doi.org/10.1109/access.2021.3140175