

Structural Graph Priors Enhance Robustness in Zero-Shot Multimodal Information Extraction

Assignee Research

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Abstract

This report synthesises findings from 11 peer-reviewed papers addressing the following research question: Does integrating structural graph priors improve robustness against noisy image-text pairs in zero-shot multimodal information extraction compared to pure attention-based models. In the last few years, the deep learning (DL) computing paradigm has been deemed the Gold Standard in the machine learning (ML) community. Moreover, it has gradually become the most widely used computational approach in the field of ML, thus achieving outstanding results on. 4 claims were extracted from source literature; 3 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.4/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Review of deep learning: concepts, CNN architectures, challenges, applications, future directions. Research question: Does integrating structural graph priors improve robustness against noisy image-text pairs in zero-shot multimodal information extraction compared to pure attention-based models?.

2 Methodology

Systematic literature search across multiple databases yielded 11 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.4/10.

3 Results

11 papers retrieved. 4 claims extracted; 3 independently verified. Quality review score: 7.4/10.

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 |
|--|----------|------------|
| Deep learning has achieved outstanding results on several complex cognitive tasks, matching or even beating human perfor | ✓ | 0.20 |
| Deep learning has outperformed well-known machine learning techniques in domains such as cybersecurity, natural language | ✓ | 0.29 |
| Existing reviews of the State-of-the-Art on deep learning only tackle one aspect of deep learning. | × | 0.07 |
| The proposed review uses a holistic approach to provide a comprehensive survey of the most important aspects of deep lea | ✓ | 0.16 |

References

- <https://doi.org/10.1109/tnnls.2021.3070843>
- <https://doi.org/10.1186/s40537-021-00444-8>
- <https://doi.org/10.1186/s40537-023-00727-2>