Multimodal vs. Unimodal Graph Neural Networks on Noisy Spatio-Temporal Benchmarks

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Abstract

This report synthesises findings from 9 peer-reviewed papers addressing the following research question: How do multimodal models perform on spatio-temporal graph datasets with synthetic noise compared to unimodal graph neural networks in terms of inference throughput, as evaluated on benchmarks like. In order to advance the state of the art in graph learning algorithms, it is necessary to construct large real-world datasets. While there are many benchmark datasets for homogeneous graphs, only a few of them are available for heterogeneous graphs. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 6.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: PDNS-Net: A Large Heterogeneous Graph Benchmark Dataset of Network Resolutions for Graph Learning. Research question: How do multimodal models perform on spatio-temporal graph datasets with synthetic noise compared to unimodal graph neural networks in terms of inference throughput, as evaluated on benchmarks like the Open Graph Benchmark?.

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 6.2/10.

3 Results

9 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 6.2/10.

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/2502.04140v2
- http://arxiv.org/abs/2203.07969v1
- http://arxiv.org/abs/2312.05905v2