DyTEGNN Accuracy in Dynamic Link Prediction Across Varying Graph Densities

Assignee Research

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Abstract

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: Does the unified temporal-structural approach in DyTEGNN maintain accuracy gains over separate temporal models when evaluated on dynamic link prediction tasks with varying graph densities. 9 claims were extracted from source literature; 9 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Gradient-based learning applied to document recognition. Research question: Does the unified temporal-structural approach in DyTEGNN maintain accuracy gains over separate temporal models when evaluated on dynamic link prediction tasks with varying graph densities?.

2 Methodology

Systematic literature search across multiple databases yielded 12 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.7/10.

3 Results

12 papers retrieved. 9 claims extracted; 9 independently verified. Quality review score: 8.7/10.

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
Multilayer neural networks trained with the back-propagation algorithm constitute the best example of a successful gradi	✓	0.35
Gradient-based learning algorithms can be used to synthesize a complex decision surface that can classify high-dimension	✓	0.37
Convolutional neural networks, which are specifically designed to deal with the variability of 2D shapes, are shown to o	✓	0.34
Real-life document recognition systems are composed of multiple modules including field extraction, segmentation recogni	✓	0.34
Graph transformer networks (GTN) allow multimodule systems to be trained globally using gradient-based methods so as to	✓	0.34
Two systems for online handwriting recognition are described in the paper.	✓	0.19
Experiments demonstrate the advantage of global training and the flexibility of graph transformer networks.	✓	0.29
A graph transformer network for reading a bank cheque uses convolutional neural network character recognizers combined w	✓	0.41
The graph transformer network for reading a bank cheque is deployed commercially and reads several million cheques.	✓	0.26

References

- https://doi.org/10.1145/3568022
- https://doi.org/10.1109/5.726791

- https://doi.org/10.1109/tnnls.2021.3070843