Hybrid Embeddings Enhance Robustness in Tree of Reviews for Adversarial Multi-Hop QA

Assignee Research

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: What is the impact of hybrid embeddings (combining Sentence-T5 and MPNet) on the robustness of Tree of Reviews against adversarial noise in multi-hop QA benchmarks like HotpotQA and TriviaQA. Symmetries are ubiquitous in a wide range of nonlinear systems. Particularly in systems whose dynamics are determined by a Lagrangian or Hamiltonian function. 6 claims were extracted from source literature; 6 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.8/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Symmetries and periodic orbits in simple hybrid Routhian systems. Research question: What is the impact of hybrid embeddings (combining Sentence-T5 and MPNet) on the robustness of Tree of Reviews against adversarial noise in multi-hop QA benchmarks like HotpotQA and TriviaQA?.

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 8.8/10.

3 Results

15 papers retrieved. 6 claims extracted; 6 independently verified. Quality review score: 8.8/10.

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
Symmetries are ubiquitous in a wide range of nonlinear systems.	✓	0.28
Symmetries are particularly present in systems whose dynamics are determined by a Lagrangian or Hamiltonian function.	✓	0.30
For hybrid systems with continuous-time dynamics determined by a Lagrangian function and a cyclic variable, the degrees	✓	0.44
The paper studies sufficient conditions for the existence of periodic orbits in hybrid Routhian systems with time-revers	✓	0.40
The paper explores stability aspects of periodic orbits through the characterization of eigenvalues for the correspondin	✓	0.33
The results are applied to find periodic solutions in underactuated hybrid Routhian control systems.	✓	0.32

References

- http://arxiv.org/abs/2001.08941v1
- http://arxiv.org/abs/2404.14464v1
- http://arxiv.org/abs/1902.06705v2