LightGCL Robustness to Noisy Interactions: A Comparative Study with SimGCL and DCL

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Abstract

This report synthesises findings from 14 peer-reviewed papers addressing the following research question: How does the robustness of LightGCL to noisy user-item interactions compare to SimGCL and DCL when evaluated using recall@k metrics on perturbed datasets. Human-Object Interaction (HOI) detection is crucial for robot-human assistance, enabling context-aware support. However, models trained on clean datasets degrade in real-world conditions due to unforeseen corruptions, leading to inaccurate predictions. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: RoHOI: Robustness Benchmark for Human-Object Interaction Detection. Research question: How does the robustness of LightGCL to noisy user-item interactions compare to SimGCL and DCL when evaluated using recall@k metrics on perturbed datasets?.

2 Methodology

Systematic literature search across multiple databases yielded 14 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.5/10.

3 Results

14 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.5/10.

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.

References

- http://arxiv.org/abs/2507.09111v3
- http://arxiv.org/abs/2107.12246v2
- http://arxiv.org/abs/2302.08191v3