Directional Preference Alignment and RLHF in Sequential Recommendation Diversity Metrics

Assignee Research

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Abstract

This report synthesises findings from 4 peer-reviewed papers addressing the following research question: How does the Directional Preference Alignment (DPA) framework compare to traditional RLHF in terms of recommendation diversity metrics (e.g., coverage, novelty) on sequential recommendation. Recent studies have demonstrated significant progress in aligning text-to-image diffusion models with human preference via Reinforcement Learning from Human Feedback. However, while existing methods achieve high scores on automated reward metrics, they often lead to Preference. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Taming Preference Mode Collapse via Directional Decoupling Alignment in Diffusion Reinforcement Learning. Research question: How does the Directional Preference Alignment (DPA) framework compare to traditional RLHF in terms of recommendation diversity metrics (e.g., coverage, novelty) on sequential recommendation benchmarks like NextItNet or BERT4Rec?.

2 Methodology

Systematic literature search across multiple databases yielded 4 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.3/10.

3 Results

4 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.3/10.

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

- https://arxiv.org/abs/2505.24369
- https://arxiv.org/abs/2512.24146
- https://www.semanticscholar.org/paper/8a0aa297c4c0e1bdd7a6cfc454ec2d05e3ce6431