Iterative Retrieval-Generation Synergy in RAG Systems for Multi-Hop QA Under Adversarial Distractors

Assignee Research

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Abstract

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: How does the integration of iterative retrieval-generation synergy in RAG systems affect performance on adversarial distractors in multi-hop QA benchmarks like HotPotQA, comparing dense and sparse. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Blended RAG: Improving RAG (Retriever-Augmented Generation) Accuracy with Semantic Search and Hybrid Query-Based Retrievers. Research question: How does the integration of iterative retrieval-generation synergy in RAG systems affect performance on adversarial distractors in multi-hop QA benchmarks like HotPotQA, comparing dense and sparse retrievers using metrics such as retrieval precision and answer accuracy?.

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 3.7/10.

3 Results

12 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.7/10.

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.

References

- http://arxiv.org/abs/2404.07220v2
- http://arxiv.org/abs/2510.25621v1
- http://arxiv.org/abs/2604.18234v1