

Hybrid vs. Dense Retrievers in Blended RAG: Recall at K on Large-Scale HotpotQA

Assignee Research

June 8, 2026

Abstract

This report synthesises findings from 11 peer-reviewed papers addressing the following research question: How does the recall@K metric of hybrid retrievers in Blended RAG compare to dense-only retrievers on the HotpotQA benchmark when the document corpus scales beyond 500K entries. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.0/10. 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 recall@K metric of hybrid retrievers in Blended RAG compare to dense-only retrievers on the HotpotQA benchmark when the document corpus scales beyond 500K entries?.

2 Methodology

Systematic literature search across multiple databases yielded 11 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.0/10.

3 Results

11 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 4.0/10.

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/2510.15253v3>
- <http://arxiv.org/abs/2504.01346v4>