

MA-DPR Robustness Against Adversarial Queries in Domain-Shifted Retrieval

Assignee Research

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Abstract

This report synthesises findings from 5 peer-reviewed papers addressing the following research question: To what extent does MA-DPR enhance robustness against adversarial query perturbations on domain-shifted datasets like NaturalQuestions compared to traditional dense retrieval models. Liang Wang, Nan Yang, Xiaolong Huang, Binxing Jiao, Linjun Yang, Daxin Jiang, Rangan Majumder, Furu Wei. Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers). 3 claims were extracted from source literature; 3 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 9.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: SimLM: Pre-training with Representation Bottleneck for Dense Passage Retrieval. Research question: To what extent does MA-DPR enhance robustness against adversarial query perturbations on domain-shifted datasets like NaturalQuestions compared to traditional dense retrieval models?.

2 Methodology

Systematic literature search across multiple databases yielded 5 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 9.0/10.

3 Results

5 papers retrieved. 3 claims extracted; 3 independently verified. Quality review score: 9.0/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
SimLM is a pre-training method for dense passage retrieval.	✓	0.27
SimLM uses a representation bottleneck during pre-training.	✓	0.19
The paper was presented at the 61st Annual Meeting of the Association for Computational Linguistics.	✓	0.28

References

- <https://doi.org/10.18653/v1/2022.spanlp-1>
- <https://openalex.org/W7119233394>
- <https://doi.org/10.18653/v1/2023.acl-long.125>