

Vendi-RAG Diversity Weights and FLAN-T5-xl Accuracy-Energy Trade-offs in NLI Benchmarks

Assignee Research

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Abstract

This report synthesises findings from 5 peer-reviewed papers addressing the following research question: What is the impact of varying Vendi-RAG diversity weights on the trade-off between answer accuracy and energy consumption for FLAN-T5-xl across natural language inference benchmarks. Large Language Models (LLMs) have recently demonstrated remarkable capabilities in natural language processing tasks and beyond. This success of LLMs has led to a large influx of research contributions in this direction. 8 claims were extracted from source literature; 8 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: A Comprehensive Overview of Large Language Models. Research question: What is the impact of varying Vendi-RAG diversity weights on the trade-off between answer accuracy and energy consumption for FLAN-T5-xl across natural language inference benchmarks?.

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 8.5/10.

3 Results

5 papers retrieved. 8 claims extracted; 8 independently verified. Quality review score: 8.5/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
Large Language Models (LLMs) have demonstrated remarkable capabilities in natural language processing tasks and beyond.	✓	0.28
The success of LLMs has led to a large influx of research contributions in this direction.	✓	0.27
These works encompass diverse topics such as architectural innovations, better training strategies, context length impro	✓	0.42
With the rapid development of techniques and regular breakthroughs in LLM research, it has become considerably challengi	✓	0.36
Considering the rapidly emerging plethora of literature on LLMs, it is imperative that the research community is able to	✓	0.41
This article provides an overview of the existing literature on a broad range of LLM-related concepts.	✓	0.32
Our self-contained comprehensive overview of LLMs discusses relevant background concepts along with covering the advance	✓	0.39
This review article is intended to not only provide a systematic survey but also a quick comprehensive reference for the	✓	0.45

References

- <https://doi.org/10.48550/arxiv.2307.10169>
- <https://doi.org/10.48550/arxiv.2307.06435>
- <https://doi.org/10.1140/epjds/s13688-024-00481-2>