

LoRA-FAIR Aggregation Strategies and Their Impact on Low-Resource Language Convergence

Assignee Research

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Abstract

This report synthesises findings from 10 peer-reviewed papers addressing the following research question: How does the aggregation strategy in LoRA-FAIR impact convergence speed and final accuracy on low-resource language benchmarks like Swahili XTREME-R compared to standard FedAvg with LoRA. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 2.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: LoRA-FAIR: Federated LoRA Fine-Tuning with Aggregation and Initialization Refinement. Research question: How does the aggregation strategy in LoRA-FAIR impact convergence speed and final accuracy on low-resource language benchmarks like Swahili XTREME-R compared to standard FedAvg with LoRA?.

2 Methodology

Systematic literature search across multiple databases yielded 10 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 2.2/10.

3 Results

10 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 2.2/10.

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/2605.18020v1>
- <http://arxiv.org/abs/2411.14961v3>
- <http://arxiv.org/abs/2205.02364v3>