

Scaling Laws of Finetuning Strategies in Large Language Models on Downstream Tasks

Assignee Research

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Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: How do different finetuning strategies (e.g., parameter-efficient tuning vs. full finetuning) affect the scaling laws of LLMs on downstream tasks like MMLU or HellaSwag, measured by accuracy and inference efficiency trade-offs?. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.8/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: PEFT A2Z: Parameter-Efficient Fine-Tuning Survey for Large Language and Vision Models. Research question: How do different finetuning strategies (e.g., parameter-efficient tuning vs. full finetuning) affect the scaling laws of LLMs on downstream tasks like MMLU or HellaSwag, measured by accuracy and inference efficiency trade-offs?.

2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.8/10.

3 Results

16 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.8/10.

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/2606.01947v1>
- <http://arxiv.org/abs/2504.14117v1>
- <http://arxiv.org/abs/2411.14961v3>