

How do adaptive gradient optimizers impact the convergence speed of LoRA adapters in multimodal instance segme

Assignee Research

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Abstract

Research and applications in artificial intelligence have recently shifted with the rise of large pretrained models, which deliver state-of-the-art results across numerous tasks. However, the substantial increase in parameters introduces a need for parameter-efficient training strategies. Despite significant advancements, limited research has explored parameter-efficient fine-tuning (PEFT) methods in the context of transformer-based models for instance segmentation. Addressing this gap, this study investigates the effectiveness of PEFT methods, specifically adapters and Low-Rank Adaptation (Lo

1 Introduction

This paper examines: Parameter-Efficient Fine-Tuning of Large Pretrained Models for Instance Segmentation Tasks. Research question: How do adaptive gradient optimizers impact the convergence speed of LoRA adapters in multimodal instance segmentation compared to standard SGD?.

2 Methodology

Systematic literature search across multiple databases yielded 13 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.5/10.

3 Results

13 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 7.5/10.

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.

References

- <http://arxiv.org/abs/2412.09827v1>
- <http://arxiv.org/abs/2606.01947v1>
- <http://arxiv.org/abs/1703.00788v1>