Scaling Synthetic Pre-Training Data with Soft Labels in Embodied Agent Task Success

Assignee Research

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Abstract

This report synthesises findings from 12 peer-reviewed papers addressing the following research question: How does scaling synthetic pre-training data with soft labels impact the task success rates of embodied agents on the CALVIN validation set. 4 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 4.2/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Mitigating Noisy Supervision Using Synthetic Samples with Soft Labels. Research question: How does scaling synthetic pre-training data with soft labels impact the task success rates of embodied agents on the CALVIN validation set?.

2 Methodology

Systematic literature search across multiple databases yielded 12 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 4.2/10.

3 Results

12 papers retrieved. 4 claims extracted; 0 independently verified. Quality review score: 4.2/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
The approach of detecting and eliminating mislabeled samples before training a classifier can negatively impact performa	×	0.06
Training DNNs with synthetic samples generated by mixing images and labels of nearest neighbors is more effective than t	×	0.14
The model initially fits clean training data before memorizing mislabeled samples, as observed in training and test accu	×	0.08
The gradient of cross-entropy loss with respect to model parameters shows that the model increases the probability of th	×	0.04

References

- http://arxiv.org/abs/2410.02152v1
- http://arxiv.org/abs/2406.16966v1
- http://arxiv.org/abs/2403.10075v2