Diverse Feedback Training in RLHF-Blender Enhances CodeT5+ Pass@k on HumanEval-Plus

Assignee Research

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: How does training reward models on diverse feedback types in RLHF-Blender impact the pass@k scores of CodeT5+ on the HumanEval-plus benchmark compared to single-source feedback. 16 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Diverse Video Generation with Determinantal Point Process-Guided Policy Optimization. Research question: How does training reward models on diverse feedback types in RLHF-Blender impact the pass@k scores of CodeT5+ on the HumanEval-plus benchmark compared to single-source feedback?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.3/10.

3 Results

15 papers retrieved. 16 claims extracted; 0 independently verified. Quality review score: 3.3/10.

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
DPP-GRPO was evaluated on the Wan2.1, CogVideoX, and VEO3 text-to-video models.	×	0.12
The study benchmarks DPP-GRPO against Promptist, Prompt-A-Video, and GPT-5.	×	0.11
All experiments were conducted on four NVIDIA L40S GPUs.	×	0.05
The training process consists of 50 iterations of supervised fine-tuning followed by approximately 1,200 iterations of G	×	0.05
The learning rate is set to 2 $\times$ 10-5 for supervised fine-tuning and 2 $\times$ 10-7 during GRPO optimization.	×	0.04
The default values for lambda_diversity and lambda_relevance are both 0.5.	×	0.02
The dataset used comprises 30,000 user query–sample pairs.	×	0.04
Wan2.1 and CogVideoX are used as backbone models, and Qwen2-7b-Instruct is used as the alignment model.	×	0.03
The default generation settings use a guidance scale of 6, 40 inference steps, and 81 output frames per video.	×	0.03
Evaluation on the VEO3 model is restricted to qualitative comparisons due to high costs ($3,000 for 1,000 videos).	×	0.03
The method produces diverse sets without post-hoc cherry-picking due to a DPP-based diminishing-returns objective.	×	0.10
Base models and prompt optimization methods exhibit failure modes of homogeneous output generation and weak semantic gro	×	0.05
CLIP alignment scores remain stable across different set sizes, with only a mild drop observed for larger sets.	×	0.02
The authors claim this is the first work to tackle the diversity problem in video generation.	×	0.11
The method requires no architectural changes to the underlying models.	×	0.03
The authors released a curated dataset of 30,000 diverse prompt–variant pairs.	×	0.11

References

- http://arxiv.org/abs/2501.01054v1
- http://arxiv.org/abs/2308.04332v1
- http://arxiv.org/abs/2511.20647v1