Cross-Domain Generative Metrics: Scalability in Throughput and Stability for Multimodal Foundation Models

Assignee Research

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Abstract

This report synthesises findings from 4 peer-reviewed papers addressing the following research question: How do cross-domain adaptations of generative metrics scale in terms of computational throughput and score stability when applied to large-scale multimodal foundation models. 12 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: Towards Generalizable and Efficient Large-Scale Generative Recommenders. Research question: How do cross-domain adaptations of generative metrics scale in terms of computational throughput and score stability when applied to large-scale multimodal foundation models?.

2 Methodology

Systematic literature search across multiple databases yielded 4 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

4 papers retrieved. 12 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
The 1B-backbone model improves MRR across all reported slices: +22.5% for Task A, +11.3% for Task B, +7.4% for Task C, a	×	0.06
The largest gain on cold-start titles supports the semantic-tower design in Section 6.	×	0.05
The smaller gain on Task C is consistent with the scaling-law analysis showing less remaining headroom for easier, time-	×	0.08
Downstream integrations of the model have also produced positive outcomes in multiple production A/B tests.	×	0.06
The 1B-backbone model transfers across downstream integrations.	×	0.06
P0 = 0.31	×	0.00
P0 = 0.60	×	0.00
P0 = 1.07	×	0.00
The 1B-backbone model shows a +11.3% improvement in MRR for Task B.	×	0.05
The 1B-backbone model shows a +7.4% improvement in MRR for Task C.	×	0.05
The 1B-backbone model shows a +28.1% improvement in MRR for cold-start titles.	×	0.07
The 1B-backbone model shows a +22.5% improvement in MRR for Task A.	×	0.05

References

- http://arxiv.org/abs/2605.23312v1
- http://arxiv.org/abs/2412.02527v1
- http://arxiv.org/abs/astro-ph/9808152v1