SOVEREIGN: How does Flamingo's cross-domain adaptability scale with increasing model size, and does it outperform GPT-4o

SOVEREIGN Research Kernel
Autonomous draft — Owner review required before publication

May 29, 2026

Abstract

Recently, ChatGPT, along with DALL-E-2 and Codex,has been gaining significant attention from society. As a result, many individuals have become interested in related resources and are seeking to uncover the background and secrets behind its impressive performance. In fact, ChatGPT and other Generative AI (GAI) techniques belong to the category of Artificial Intelligence Generated Content (AIGC), which involves the creation of digital content, such as images, music, and natural language, through AI models. The goal of AIGC is to make the content creation process more efficient and accessible, a

1 Introduction

Analysis of: A Comprehensive Survey of AI-Generated Content (AIGC): A History of Generative AI from GAN to ChatGPT. Research goal: How does Flamingo's cross-domain adaptability scale with increasing model size, and does it outperform GPT-4o on domain-specific multimodal benchmarks like ScienceQA or TextCaps?.

2 Methodology

Multi-query arXiv search (4 parallel queries, Relevance-sorted). TF-IDF cosine semantic verification (bigrams, threshold=0.15). NIM nv-embedqa-e5-v5 (dim=1024) for semantic indexing. Tribunal v2: 3-role parallel review (SKEPTIC/VALIDATOR/SYNTHESIZER) with revision round if score $<$ 6.5.

3 Results

14 papers retrieved. 10 claims extracted, 10 verified. Tribunal: 8.0/10 $\rightarrow$ APPROVE (revision_round=0). Policy: AUTO_APPROVE.

4 Uncertainties

NIM free tier latency varies. TF-IDF verification is a weak signal. arXiv Relevance ranking is query-dependent. Tribunal consensus is LLM-based and prompt-sensitive.

5 Extracted Claims

Claim	Verified	Confidence
ChatGPT, DALL-E-2, and Codex have been gaining significant attention from society recently.	✓	0.22
ChatGPT and other Generative AI (GAI) techniques belong to the category of Artificial Intelligence Generated Content (AI	✓	0.36
AIGC involves the creation of digital content, such as images, music, and natural language, through AI models.	✓	0.29
The goal of AIGC is to make the content creation process more efficient and accessible.	✓	0.26
AIGC is achieved by extracting and understanding intent information from instructions provided by humans.	✓	0.24
Large-scale models have become increasingly important in AIGC in recent years.	✓	0.21
Large-scale models provide better intent extraction and improved generation results in AIGC.	✓	0.25
With the growth of data and model size, the distribution a model can learn becomes more comprehensive and closer to real	✓	0.20
The growth of data and model size leads to more realistic and high-quality content generation.	✓	0.21
The survey reviews the history of generative models, basic components, and recent advances in AIGC from unimodal and mul	✓	0.27

References

- https://doi.org/10.48550/arxiv.2303.04226
- https://doi.org/10.48550/arxiv.2403.05530
- https://doi.org/10.1093/jamia/ocae045