Robustness in Multilingual Models: Intermediate-Task Training Duration and Typological Differences

Assignee Research

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Abstract

Despite remarkable advancements in few-shot generalization in natural language processing, most models are developed and evaluated primarily in English. To facilitate research on few-shot cross-lingual transfer, we introduce a new benchmark, called BUFFET, which unifies 15 diverse tasks across 54 languages in a sequence-to-sequence format and provides a fixed set of few-shot examples and instructions. BUFFET is designed to establish a rigorous and equitable evaluation framework for few-shot cross-lingual transfer across a broad range of tasks and languages. Using BUFFET, we perform thorough ev

1 Introduction

This paper examines: BUFFET: Benchmarking Large Language Models for Few-shot Cross-lingual Transfer. Research question: What is the impact of intermediate-task training duration on the robustness of multilingual models against typological differences in zero-shot cross-lingual transfer?.

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 9.3/10.

3 Results

4 papers retrieved. 7 claims extracted; 7 independently verified. Quality review score: 9.3/10.

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
BUFFET is a new benchmark designed to evaluate few-shot cross-lingual transfer in natural language processing.	✓	0.25
BUFFET unifies 15 diverse tasks across 54 languages in a sequence-to-sequence format.	✓	0.30
BUFFET provides a fixed set of few-shot examples and instructions for evaluation.	✓	0.22
BUFFET is designed to establish a rigorous and equitable evaluation framework for few-shot cross-lingual transfer.	✓	0.34
State-of-the-art multilingual large language models were evaluated using BUFFET with different transfer methods, includi	✓	0.33
ChatGPT with in-context learning often performs worse than much smaller mT5-base models fine-tuned on English task data	✓	0.41
The analysis suggests various avenues for future research in few-shot cross-lingual transfer, such as improved pretraini	✓	0.41

References

- https://doi.org/10.18653/v1/2021.sigmorphon-1.25
- https://doi.org/10.48550/arxiv.2305.14857
- https://doi.org/10.18653/v1/2025.acl-long.778