Adversarial Contrastive Learning Negative Sample Scaling in Cross-Lingual Rumor Detection

Assignee Research

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Abstract

This report synthesises findings from 7 peer-reviewed papers addressing the following research question: What is the impact of varying the number of negative samples in adversarial contrastive learning on inference throughput for cross-lingual rumor detection in TyDi QA subsets. Infinite numbers of real-world applications use Machine Learning (ML) techniques to develop potentially the best data available for the users. Transfer learning (TL), one of the categories under ML, has received much attention from the research communities in the past few years. 8 claims were extracted from source literature; 7 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Transfer learning: a friendly introduction. Research question: What is the impact of varying the number of negative samples in adversarial contrastive learning on inference throughput for cross-lingual rumor detection in TyDi QA subsets?.

2 Methodology

Systematic literature search across multiple databases yielded 7 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.5/10.

3 Results

7 papers retrieved. 8 claims extracted; 7 independently verified. Quality review score: 8.5/10.

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
Transfer learning (TL) is a category under Machine Learning (ML).	✓	0.21
Transfer learning has received significant attention from research communities in the past few years.	✓	0.19
Traditional ML algorithms operate under the assumption that a model uses a limited data distribution to train and test s	✓	0.31
Conventional ML methods are applied to small data distributions.	×	0.14
Transfer learning utilizes connectivity among additional testing and training samples.	✓	0.20
Transfer learning results in faster output with efficient results compared to traditional methods.	✓	0.16
Inductive TL, Transductive TL, and Unsupervised TL are techniques within the domain of Transfer Learning.	✓	0.27
Unsupervised Transfer Learning consists of sample selection and domain adaptation.	✓	0.22

References

- https://doi.org/10.1186/s40537-022-00652-w
- https://doi.org/10.1109/tnnls.2021.3070843
- https://doi.org/10.1109/access.2024.3365742