Adversarial Contrastive Pre-Training for Cross-Domain Rumor Detection Performance

Assignee Research

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Abstract

This report synthesises findings from 5 peer-reviewed papers addressing the following research question: How do adversarial contrastive pre-trained models perform on cross-domain rumor detection tasks, as measured by accuracy on datasets like PHEME and FakeNewsNet, compared to non-adversarial. 12 claims were extracted from source literature; 12 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.7/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: A review of fake news detection approaches: A critical analysis of relevant studies and highlighting key challenges associated with the dataset, feature representation, and data fusion. Research question: How do adversarial contrastive pre-trained models perform on cross-domain rumor detection tasks, as measured by accuracy on datasets like PHEME and FakeNewsNet, compared to non-adversarial contrastive pre-trained models?.

2 Methodology

Systematic literature search across multiple databases yielded 5 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.7/10.

3 Results

5 papers retrieved. 12 claims extracted; 12 independently verified. Quality review score: 8.7/10.

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
Social networks have become the main source to acquire news about current global affairs.	✓	0.26
Fake news appears and spreads on social media daily.	✓	0.22
Fake news has a negative influence on several domains, such as politics, the economy, and health.	✓	0.22
Fake news generates detriments to societal stability.	✓	0.19
Several studies have provided effective models for detecting fake news in social networks through a variety of methods.	✓	0.30
The accuracy of the detection models was found to be notably insufficient.	✓	0.22
Most review articles have focused on specific and recurring aspects of fake news detection models.	✓	0.30
The majority of reviews have primarily focused on dividing datasets, features, and classifiers used in this field by typ	✓	0.31
The limitations of the datasets, their features, how these features are fused, and the impact of all these factors on de	✓	0.31
Most detection models were based on a supervised learning approach.	✓	0.23
This review article analyzes relevant studies for the few last years and highlights the challenges faced by fake news de	✓	0.39
The investigation of fake news detection studies relied on the following aspects and their impact on detection accuracy,	✓	0.38

References

- https://doi.org/10.1007/s00530-022-00966-y
- https://doi.org/10.3390/app131910980
- https://doi.org/10.1016/j.heliyon.2023.e20382