Contrastive Learning with Propagation Structure for Robust Low-Resource Rumor Detection

Assignee Research

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Abstract

This report synthesises findings from 8 peer-reviewed papers addressing the following research question: What is the effect of incorporating propagation structure into contrastive frameworks on the robustness of CodeT5 across different domains in low-resource rumor detection tasks. 15 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: A Unified Contrastive Transfer Framework with Propagation Structure for Boosting Low-Resource Rumor Detection. Research question: What is the effect of incorporating propagation structure into contrastive frameworks on the robustness of CodeT5 across different domains in low-resource rumor detection tasks?.

2 Methodology

Systematic literature search across multiple databases yielded 8 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.5/10.

3 Results

8 papers retrieved. 15 claims extracted; 0 independently verified. Quality review score: 3.5/10.

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
There are no public benchmarks available for detecting low-resource rumors with propagation tree structure in tweets.	×	0.12
The datasets contain two binary labels: Rumor and Non-rumor.	×	0.09
The statistics of the six datasets are shown in Table 1.	×	0.01
EngCovid, ChiCovid, CanCovid and AraCovid denote the English-COVID19, Chinese-COVID19, Cantonese-COVID19 and Arabic-COVI	×	0.00
The model comparison includes several state-of-the-art baseline models.	×	0.06
The experimental setup involves comparing the model with baselines on different datasets.	×	0.04
The datasets include English-COVID19, Chinese-COVID19, Cantonese-COVID19, and Arabic-COVID19.	×	0.01
The datasets have varying numbers of events, tree nodes, non-rumors, rumors, average time per tree, and average depth pe	×	0.06
The datasets are in different languages and domains.	×	0.08
The performance metrics include accuracy and macro-F1 scores for rumor and non-rumor classes.	×	0.07
The proposed model achieves higher accuracy and macro-F1 scores compared to baseline models.	×	0.03
The methodology involves transforming microblog posts into language-independent vectors.	×	0.07
The propagation structure of rumors is presented as an undirected topology.	×	0.12
A multi-scale Graph Convolutional mechanism is used to catch informative patterns.	×	0.10
A novel domain-adaptive contrastive learning paradigm is proposed to minimize the domain gap.	×	0.13

References

- http://arxiv.org/abs/2204.08143v2
- http://arxiv.org/abs/2508.07201v1
- http://arxiv.org/abs/2304.01492v5