

Deep Learning vs. Signature-Based Network Intrusion Detection Inference Efficiency

Assignee Research

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: How does the inference efficiency of deep learning-based network intrusion detection models compare to traditional signature-based systems when evaluated on high-throughput benchmark datasets. Cyber intrusion attacks that compromise the users' critical and sensitive data are escalating in volume and intensity, especially with the growing connections between our daily life and the Internet. The large volume and high complexity of such intrusion attacks have impeded the. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 1.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: A Hybrid Deep Learning Anomaly Detection Framework for Intrusion Detection. Research question: How does the inference efficiency of deep learning-based network intrusion detection models compare to traditional signature-based systems when evaluated on high-throughput benchmark datasets?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 1.5/10.

3 Results

15 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 1.5/10.

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.

References

- <http://arxiv.org/abs/2212.00966v1>
- <http://arxiv.org/abs/2306.13030v2>
- <http://arxiv.org/abs/2307.05639v2>