Outlook

[IAAA'2026] Review for paper #1571272249 completed

From Edas Help <help@edas.info>
Date Wed 2026-04-29 2:06 PM
To Nguyễn Duy Huy <nguyenduyhuy@humg.edu.vn>

Dear Mr. Duy-Huy Nguyen,

Thank you for completing the review of the paper #1571272249 ("A Hybrid Predictive Architecture Based on Deep Learning and Machine Learning for Network Intrusion Detection") for IAAA'2026. Below is a copy of your review.

You can modify the report by going to https://edas.info/R.php?r=14103268 up to the due date of Apr 28.

Best regards,
The conference chairs

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Solid work of notable importance. (4)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Well written. (4)

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

The study does not just propose a model but compares it against six other deep learning models (CNN, LSTM, Transformer, etc.) and various ML classifiers (RF, DT). The explicit use of a balanced class weighting technique is a strong point, as data imbalance (80.32% benign vs. 19.68 % attack) is a major hurdle in IDS tasks. The model achieves a high F1-Score (96.16 %) while maintaining a lower training time (3507.03 s) compared to end-to-end models like LSTM (10122.91 s), demonstrating a successful optimization of

computational overhead.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

The concept of using a DL model as a feature extractor for an ML classifier is relatively common in recent literature. While hyperparameters are listed (e.g., 128 hidden units, max_depth=9 for XGBoost), there is limited discussion on the optimization process (e.g., Grid Search or Bayesian Optimization) used to arrive at these specific values. The experiments were conducted on an Intel Core i7-10810U processor, which may not fully reflect the performance of these models in high-throughput enterprise environments.

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

- Include a discussion on inference latency (time per packet) in addition to training time, as real-time detection is crucial for IDS.
- Provide more detail on why the 128-dimensional embedding was chosen specifically and how varying this dimension affects the ML classifier's performance.
- While CIC-IDS2017 is good, a brief mention or testing on even more recent sets like CSE-CIC-IDS2018 would strengthen the claim of "modern" threat detection.

> *** Comments to the TPC: Confidential comments to the TPC (will be not sent to Authors)

The paper presents a robust hybrid framework that effectively addresses the trade-off between detection performance and computational efficiency. The experimental results are convincing, and the methodology for handling imbalanced data is well-implemented. It is a solid contribution suitable for the conference.

> *** Submission Policy: Does the paper list the same author(s), title and abstract (minor wording differences in the abstract are ok) in its PDF file and EDAS registration?

The author(s), title and abstract are the same in its PDF file and EDAS registration.

> *** Overall Recommendation: Overall Recommendation
Accepted (1)