Review of: "Generative Artificial Intelligence Using Machine Learning on Wireless Ad Hoc Networks"

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Potential competing interests: No potential competing interests to declare.

The use of Generative Artificial Intelligence for optimizing wireless Ad-Hoc networks is innovative and demonstrates the growing intersection of AI and network optimization. The study effectively highlights the importance of using neural networks like MLP and RBF for predictive modeling in this context.

The paper provides a comprehensive overview of the experimental process, but it could be enhanced by detailing the influence of specific variables like signal-to-noise ratio and interference levels. This would help readers understand the impact of these metrics on network performance.

The structured presentation of the experiments, particularly the comparison between tests with varying hidden layers, is effective in illustrating the complexity involved in optimizing neural network configurations for different scenarios.

It is commendable that the article outlines the relevance of normalizing and metricizing independent variables in building predictive models. This detail underscores the importance of data preparation in achieving accurate predictions.

The future work proposed in the paper is promising, especially the suggestion to experiment with higher numbers of layers and units. It indicates a commitment to further refining the model to enhance performance, though additional computational resources may be necessary to achieve these goals.

The authors' efforts in this article demonstrate creativity; yet, the following modifications are required:

1. The methodology section could benefit from clearer explanations of the processes involved, especially the steps in data collection, preprocessing, and feature extraction. Including visual aids like flowcharts or diagrams for each step could enhance understanding.
2. While the experimental tests are described, further details on the tools, software versions, and hardware specifications used would improve reproducibility. Additionally, providing a rationale for selecting the specific number of units and hidden layers in the neural network models would give more insight into the experimental design.
3. The paper mentions some potential drawbacks, such as computational complexity when increasing the number of hidden layers, but it lacks a comprehensive discussion on other limitations. Exploring the challenges related to the scalability of the approach or the impact of varying dataset sizes could strengthen the study.
4. The article could be improved by connecting findings to practical, real-world scenarios where Generative AI and

wireless Ad-Hoc networks are applied. This would illustrate the practical significance of the research and demonstrate its broader relevance.

5. To increase the robustness of the findings, future work could explore other neural network models or algorithms to validate the results further. Additionally, employing cross-validation techniques or testing the models on different datasets could provide deeper insights into the generalizability of the approach.