**Title :**

Consider modifying the title to *"Rhino Optimization Algorithm for Hyperparameter Optimization in Machine Learning Models"* to specify the application area.

**Areas for Improvement in the introduction:**

1.While the introduction covers key concepts, the flow between ideas could be smoother. For example, the jump from the general discussion of HPO to metaheuristic algorithms feels abrupt. It would benefit from a transitional sentence that connects the challenges of traditional HPO methods to the motivation for exploring nature-inspired algorithms.

**Lack of Specificity about Rhino Optimization Algorithm (ROA)**:

2.Since the proposal is about developing the Rhino Optimization Algorithm, the introduction should at least briefly mention this novel approach or hint at how it differs from existing BoAs. You have discussed BoAs generally, but the specific motivation for developing the ROA is missing. Add a brief mention of the Rhino Optimization Algorithm as the proposed solution.

**References:**

3.While some of the references are up-to-date (Kadr et al., 2024), others like Snoek et al. (2012) are slightly older. It's worth considering more recent work on hyperparameter optimization techniques, especially in the context of deep learning, can be cited.

**Clarification of Metaheuristics in the Context of HPO**:

4.The introduction mentions metaheuristic algorithms but doesn't fully explain their application within the scope of HPO. A brief explanation of how BoAs are applied in the hyperparameter optimization context would help strengthen the relevance of the introduction.

**Areas for Improvement in the Background:**

1. There is a limited connection to the proposed work. Introduce a paragraph that briefly explains where the ROA fits into the existing metaheuristic algorithms and why it is expected to perform better in certain aspects (e.g., balancing exploration and exploitation, speed, scalability).
2. Provide more concrete examples of optimization problems that are non-convex, non-differentiable, or involve high-dimensional search spaces, and explain why deterministic methods are inadequate in such cases.

**Comments on Problem statement.**

The problem statement would benefit from more specific examples of the limitations of existing algorithms and a clearer connection to the proposed solution. You should explicitly state how the Rhino Optimization Algorithm addresses the identified gaps.

**General objective should be like as**

The objective of this research is to develop a novel group-based swarm intelligence algorithm, named the Rhino Optimization Algorithm (ROA), inspired by the social behaviors of the Rhino swarm and modeled on animal foraging strategies to enhance exploration and exploitation phases.

**Specific Objectives:**

1. Develop a novel algorithm that can integrate with existing optimization techniques.
2. Merge various hyperparameter optimization algorithms, combining their functionalities to create a new algorithm that maximizes model performance.
3. Design a mathematical model simulating the life and behavior of rhinos for the optimization process.
4. Apply the proposed Rhino Optimization Algorithm (ROA) to deep learning models, specifically Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Long Short-Term Memory Networks (LSTMs).

**Justification of Study:**

The justification briefly mentions that no swarm optimizer has been developed based on Rhino behavior. While this is novel, the section needs a stronger rationale for why Rhino behavior is an important contribution to optimization research.

**Suggestion**: Elaborate on the biological characteristics of Rhinos that make them an ideal subject for optimization.

**Contribution:**

The contribution section is quite strong, as it clearly states the novelty of ROA. However, it can benefit from a more robust explanation of why Rhino behavior is an optimal candidate for this type of optimization.

**Suggestion:** Provide a comparison to similar algorithms and explain more clearly how Rhino behavior offers unique advantages.

**Here are few suggested research questions taking into consideration**

1. How does the Rhino Optimization Algorithm (ROA), inspired by the behavior of rhinos, improve the process of hyperparameter optimization compared to traditional methods like Grid Search, Random Search, and Bayesian Optimization?
2. To what extent can the Rhino Optimization Algorithm (ROA) achieve quasi-optimal solutions in hyperparameter optimization for complex machine learning models?
3. Does the Rhino Optimization Algorithm (ROA) strike a more effective balance between exploration and exploitation compared to other metaheuristic algorithms in the context of hyperparameter optimization?
4. What are the specific advantages of the Rhino Optimization Algorithm (ROA) when applied to deep learning models, such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and Long Short-Term Memory Networks (LSTMs)?