

## REVIEWER'S REPORT

Manuscript No.: IJAR- 52846

Date: 18-07-2025

**Title:**

**Sentiment Classification Using Hybrid TextBlob Bi-LSTM Deep Learning Model"**

### Recommendation:

Accept as it is ..... **YES** .....  
 Accept after minor revision...  
 Accept after major revision .....  
 Do not accept (*Reasons below*) .....

| Rating         | Excel. | Good | Fair | Poor |
|----------------|--------|------|------|------|
| Originality    |        |      |      | YES  |
| Techn. Quality |        |      | YES  |      |
| Clarity        |        |      | YES  |      |
| Significance   |        |      | YES  |      |

Reviewer Name: Gulnawaz Gani

### Comments for Publication

This paper proposes a hybrid TextBlob-Bi-LSTM model that enhances sentiment classification accuracy by combining lexicon-based sentiment scores with bidirectional contextual learning, particularly effective for nuanced emotional expressions.

## Reviewer's Comment / Report

- This paper introduces a hybrid TextBlob-Bi-LSTM model for sentiment classification of tweets, demonstrating improved accuracy over traditional LSTM models.
- The strength lies in its intuitive combination of lexicon-based features with deep contextual learning, addressing the limitations of each individual approach.
- However, the evaluation could be more comprehensive by including a comparison with other prominent deep learning architectures for sentiment analysis, such as CNNs or more advanced Transformer-based models, to firmly establish its state-of-the-art performance.
- The paper also mentions the use of "Amazon product reviews" as the dataset for implementation, which contradicts the abstract's focus on "tweets"; clarifying the dataset used for the reported 89.3% accuracy is essential for reproducibility and validity.
- Additionally, a deeper dive into the types of "fine or mixed emotions" where the hybrid model excels would provide valuable qualitative insights.