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REVIEWER'S REPORT

Manuscript No.: IJAR-56580

Title: Image Based Bovine Breed Recognition System

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality	✓			
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: Dr. Gulnawaz

Reviewer's Comment for Publication:

This manuscript presents an important AI-based application for livestock management through automated bovine breed recognition using deep learning and computer vision. The work demonstrates practical relevance for precision livestock farming and supports digital agricultural initiatives. The integration of CNN-based classification with a web-enabled prediction interface adds strong applied value.

Detailed Reviewer's Report

The manuscript addresses a relevant and emerging topic in agricultural artificial intelligence by proposing an image-based bovine breed recognition framework using convolutional neural networks. The subject is significant because automated breed identification can support farmers, veterinarians, and government livestock programs in improving breed documentation and digital livestock management.

Strengths:

- The topic is timely and aligned with modern precision livestock farming applications.
- The manuscript includes a broad literature review covering recent AI applications in livestock recognition.
- Practical deployment through a Flask-based web interface increases real-world usability.

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- The study highlights national relevance through linkage with indigenous breed conservation programs.

Minor Revisions Suggested:

1. The manuscript should include **exact experimental performance values** such as final accuracy, precision, recall, and F1-score in a clearly structured results table.
2. More technical details about the **dataset size, breed categories, number of images per class, and train-test split ratio** should be provided.
3. The CNN architecture requires clearer presentation, including number of layers, activation functions, and parameter settings.
4. Some literature review sections are overly descriptive and may be condensed for better readability.
5. Figures should be properly numbered, referenced consistently, and presented with improved resolution.
6. Language polishing is recommended in several sections to improve academic clarity.

Overall Evaluation:

The manuscript has good practical and technical merit. After minor revision for methodological clarity and result presentation, it will be suitable for publication.