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REVIEWER□S REPORT

Manuscript No.: IJAR-54047 **Date: 25/09/2025**

Title: Assessing Prediction Outcomes of Convolutional Neural Networks Trained on Parasite and Healthy Cell Images for Sickle-Cell & Malaria

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: Sakshi Jaju **Date:** 25/09/2025

Reviewer□s Comment for Publication.

The study develops CNN-based models for diagnosing malaria and sickle-cell diseases using image datasets. The main goal was to achieve 90% accuracy in distinguishing healthy and infected cells. Results showed higher accuracy for sickle-cell (78%) compared to malaria (68%), with scope for improvement using better preprocessing, larger datasets, and optimized splits.

Strengths:

1. Addresses an important healthcare challenge.
2. Uses real datasets with proper preprocessing.
3. Explores multiple splits and evaluation metrics.

Weaknesses:

1. Small dataset size for malaria training.
2. Overfitting issues limit generalizability.
3. Lack of external validation on clinical data.

Overall Assessment:

A promising study showing CNN's potential in disease diagnosis but needs optimization for clinical application. Article should be shortern for better understanding.

Recommendation:

Manuscript accepted for the publication .