

Response to Reviewers' comments

Reviewer	Reviewer's comments	Response/action taken
Reviewer 2	1. Page 8, experimental results, "CNN's are effective methods for identifying picture classes..." to the end of the paragraph "...The MobileNet concept aims to maximize computational power and memory use": This part of the paragraph seems to be more appropriate in the Introduction because it does not refer to the authors' results. Furthermore, exactly the same paragraph is in the Discussion (page 14).	The sentence has been added in introduction section. Furthermore, same paragraph has been removed from page no 14 to avoid the repetition of content.
	2. Page 1, Introduction: I suggest - Malaria is a parasitic disease transmitted by Plasmodium (in italic) spp. Malaria due to Plasmodium falciparum is life-threatening...	We thank the reviewer for the suggestion. We have updated the sentence.
	3. Page 1, Introduction, "report by the World Health Organization (WHO)": Please cite the WHO reference and update the data (instead of 2019, the latest available report provides an updated 2021 data): World Malaria Report 2022. (https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2022)	We have cited the latest WHO World Malaria Report 2022.
	4. If possible, add few more references.	Some appropriate references have been added.
	5. Page 2, Introduction, "conventional methods of diagnosis...": like microscopy, clinical diagnosis, and PCR. Why is microscopy not dependent on lab technician's capacity?	We have incorporated the suggestions and updated the sentence.
	6. Page 2, Introduction, "...as they are effective diagnostic methods for malaria": The reason is not only because these methods are effective, but because microscopy and/or RDT are available in the field, even in remote villages.	
	7. Page 2, Introduction, "microscopic systems...considered an effective diagnostic method as there are no shortcomings as in RDT": The meaning of this statement is not clear. The interpretation of microscopy is 'subjective,' and its effectiveness is dependent on the expertise of the microscopist. Please clarify.	
	8. Page 2, Introduction, "...classifies the infected cells [14] & [19]": If the journal requires reference citation numbering in the order of citation, these references should be 4 and 5. Please re-check reference numbering.	Corrected
	9. Page 2, Introduction, "in 2018, Md Zahangir Alom surveyed deep learning approaches": In REF 8, the author is referred to as "M.Z. Alom." Place a period after "approaches" and start a new sentence for "In that survey..."	Corrected
	11. Page 2, Introduction, "Bayesian, linear regression with Relu...": Please check the reference numbering. REF 13 to 17 and 19-20 do not seem to have been cited yet.	Corrected
	12. Page 2, Introduction, "in 2019, malaria disease is predicted using the CNN model": was predicted.	Corrected
	13. Page 2, Introduction, "In 2019, malaria disease is predicted using the CNN model... Through mobile applications, malaria disease was predicted using CNN.": I am somewhat confused with these two sentences. Do they refer to two different studies performed in 2019? Please clarify.	We have revised the sentences
	14. Page 2, Introduction, "Yuhang Dong 2017...": delete "2017"	Deleted and updated
	15. Page 2, Introduction, "...machine learning and computer vision": Period here, then a new sentence "These tools provide accurate and efficient computation (not "computationally")"	Corrected
	16. Page 2, Introduction, "employing hyperparameters...": the use of... (or employment of...); validation of different performance metrics to identify the reliability and feasibility of the proposed framework.	Corrected
	17. Page 2, Introduction, "The remaining portions of the paper..." to "concludes its findings": This paragraph can be deleted.	Deleted
	18. Page 2, Related works, "Diagnosis of malaria is done through...": diagnosis of malaria can be done through...	Corrected
	19. Page 3, Related works, "malaria, spread by Plasmodium parasites is a life-threatening disease, by the analysis of microscopic blood smear images, malaria is detected by a trained microscopist": This sentence is not correctly constructed and is a repetition. It can be deleted.	Deleted
	20. Page 3, Related works, "Quinn et al [11] and Rosado et al [17]..."	Corrected
	21. Page 3, Related works, "Rosado et al. have evaluated/assessed/studied the recognition of malaria parasites"	
	22. Page 3, Related works, "98.2% and 72.1% for WBC, respectively"	Corrected

23. Page 3, Related works, “the model’s accuracy and performance were optimized	Corrected
24. Page 3, Related works, “with the help of the deep learning model used for detection accuracy of 99.23% experienced”: Please write a complete sentence.	Rewritten the sentence
25. Page 3, Related works, “Liang et al. achieved...[6]”: REF 6 is Kuo CCJ. Please check the reference number.	Checked and corrected
26. Page 3, Related works, “BDNs give a more flexible displaying system...” Please re-write the sentence in a correct syntax, especially the second half of this sentence.	Rewritten and corrected
27. Page 3, Related works, “Alex Krizhevsky and his team...”: Please cite a reference here. Is it [27-30]?	Cited and updated
28. Page 3, Related works, “this ensemble method is a combination... variance and overfitting of the model were reduced”	Corrected
29. Page 3, Related works, “See identified that uRDDT Alere Malaria...”: Please check the meaning of this sentence. It also seems to be out of place.	Corrected
30. Page 3, Related works, “But he faced difficulties...” “The accuracy was fine”	Corrected
31. Page 3, Related works, “microscopic examination of Giemsa-stained blood films is very efficient in Plasmodium (capital letter “P” and in italics) detection” “discussed the advantages and disadvantages of other diagnostic methods...”	Corrected
32. Page 4, Related works, “In this study the fundamentals...Africa [40]”: Please write a complete sentence with a subject and a verb.	Corrected
33. Page 4, Related works, “Plasmodium falciparum” and “P. falciparum” in italics	Corrected
34. Page 4, Related works, “These results showed that some children (not “kids”)...”	Added, please find the change in revised manuscript.
35. Page 4, Related works, at the end of the sub-section “Related works”: I think that the authors should add a sentence or two to conclude this section on the overview of relevant works.	
36. Page 4, Materials and methods, NIH website: Please provide the website.	Provided
37. Page 4, Materials and methods, “the infected and uninfected cell images are shown in figures 2 and 3”: Should be Figures 1 and 2.	Corrected
38. Page 5, Materials and methods, “Figure 1. Uninfected cell images”: should be Figure 2.	Corrected
39. Page 6, Materials and methods, “The image is convolved with a kernel or filter while the transformation process.” Please complete the sentence. There is something missing here.	Corrected
40. Page 6, Materials and methods, ReLU algorithm – this should be Figure 4.	Corrected
41. Page 6, Materials and methods, “where the convolution layer is the primary component of CNN”: This is not a complete sentence.	Corrected
42. Page 7, Materials and methods, “the output at this stage is given by the equations”: The output at this stage is given by the equations (1) and (2), and this process is repeated...?	Corrected
43. Page 7, Materials and methods, “RESNET is having...”: RESNET has...; ResNet50 as shown in Figure 6 was used...	Corrected
44. Page 8, Materials and methods, block diagram of ResNet50 model – should be Fig. 6	Corrected
45. Page 8, experimental results, “malaria is a serious disease that continues to cause concern around the world”: A similar statement was made in the introduction. It was also repeated at the beginning of the Discussion (bottom of page 13). This sentence can be deleted.	Deleted and updated
46. Page 8, experimental results, “The classification performances of the algorithms are evaluated...”: The Results section should be in general written in the past tense: The classification performances of the algorithms were evaluated. The same remark for the entire section on experimental results.	Corrected and updated
47. Fig 16-18: These figures may require a legend that explains what “macro avg” and “weighted avg” mean.	Updated
48. Page 14, Discussion, three paragraphs, from “Fig. 10 presents the accuracy and loss for training and validation of the CNN model” to “in terms of f1-score, MobileNetV2 and ResNet50 attained a rate of 0.97%”: These three paragraphs are comments on the Figures presented in the Results section. They may be more appropriately placed in the Results section.	Placed and updated
49. Page 14, Discussion, “Also, an AUC value closer to Also, an AUC value closer to 1 denotes...: Delete the first “Also, an AUC value closer to” which is repeated.	Deleted

50. Page 15, Conclusions, "...that environmental elements are crucial in facilitating. Malaria's presence and transmission": Delete the period after "facilitating" and "malaria" (with small letter "m")	Deleted
51. Page 15, Conclusions, "Among all the models, ResNet50 outperformed and provide better results...": provided	Corrected
52. REF 1 is incomplete. The title of the supplement does not have to be cited. Here is how Pubmed records this publication: Wongsrichanalai C, Barcus MJ, Muth S, Sutamihardja A, Wernsdorfer WH. A review of malaria diagnostic tools: microscopy and rapid diagnostic test (RDT). Am J Trop Med Hyg. 2007;77(6 Suppl):119-127.	All are corrected
53. REF 4: Please check the authors. If there are many authors, "et al." can be used. This comment also refers to other references (for example, REF 14). This reference (REF 4) seems to be incomplete. Please provide more information (web link, for example).	
54. REF 8: This is a pre-print. If this paper was published since 2018, please provide the updated reference. Same with REF 24.	
55. REF 9: Please check if this reference is complete.	
56. REF 35 seems to be incomplete.	
57. REF 43: Applied Artificial Intelligence, 36:1	
58. REF 44: The correct citation of this REF is as follows: Marques G, Ferreras A, de la Torre-Diez I. An ensemble-based approach for automated medical diagnosis of malaria using EfficientNet. Multimed Tools Appl. 2022;81(19):28061-28078.	
59. REF 35 seems to be incomplete.	
60. REF 43: Applied Artificial Intelligence, 36:1	
61. REF 44: The correct citation of this REF is as follows: Marques G, Ferreras A, de la Torre-Diez I. An ensemble-based approach for automated medical diagnosis of malaria using EfficientNet. Multimed Tools Appl. 2022;81(19):28061-28078.	