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Article Evaluation Form

Dear Reviewer...

Please notice that reviewing needs to be conducted confidentially. The article you have been asked to review should not be disclosed to a third party. If you wish to elicit opinion from colleagues or students regarding the article you should let the editor know beforehand. ZJPAS editors welcome additional comments, but whoever else is involved will likewise need to keep the review process confidential. You should not attempt to contact the author(s). Be aware when you submit your review that any recommendations you make will contribute to the final decision made by the editor in chief.

In this form, you are asked to evaluate the article at hand on a number of criteria. In each case, please go to the drop-down list next to the item and rate the item by choosing one of the given options.

Reviewer name

Asst. Prof. Dr. Dleen Al-shrafany

Date article received

06/01/2022

Date Review Returned

07/23/2022

Title of Article

Using Unmanned Aerial Vehicle Imagery and Deep Learning for Road Pothole Detection

1. Please indicate your assessment of each criterion by selecting an option .

	Poor	Fair	Good	Excellent
1.This study arises from new theoretical results or new empirical findings; it arises from new interpretation or synthesis of known material.	○	○	◉	○
2. The title reflects the content of the paper and it is short and interesting.	○	○	◉	○
3.The abstract is short and informative enough to stand on its own	○	◉	○	○
4. The introduction of the paper describes the problem within a theoretical framework. There is no plagiarism in this section.	○	◉	○	○
5. Appropriate research design/method has been used.	◉	○	○	○
6. Appropriate, correct and rigorous analysis of the research question and/or subject matter is provided. If the study is quantitative, right robust statistics have been used.	○	◉	○	○
7. Accurate and useful interpretation has been made. Results have been reported. The study has been evaluated and compared to similar studies.	◉	○	○	○
8. Conclusion describes implications for theory, research, and/or practice. Logical conclusions from the data have be drawn.	○	◉	○	○
9. Table/figure captions are correct. Real-time tense has been used.	◉	○	○	○
10.The reference list follows ZJPAS Style. There is a good correspondence between the cited and referenced works. There is no additional or incomplete reference.	○	◉	○	○
11.The article shows a complete, clear and well organized presentation. The content is precise. The language of the paper is formal, technical and academic.	◉	○	○	○

2. Comments to author(s)

A- Scientifically-based Comments:

1- Kindly recommend to amend the manuscript title int0 (Road Pothole Detection Using Unmanned Aerial Vehicle Imagery and Deep Learning technique).

2- In "Abstract" section, author need to re-write it again with focusing on providing a brief details about the deep learning algorithm that have been used. in addition, author should justify why he/she only mentioned (mPA) as an evaluation measure in abstract while in the context of manuscript he/she conducted another evaluations measures, such as (average loss and traning time , ..).

3- In "Introduction" section, last paragraph need to be re-witten.

4- Section "2" materials and methods, author unfortunately did not clearly explain what does "average loss", "training and testing time" and "mAP" means. what is the scientific bases of conducting such evaluation measures for this particular study??

5- Section "2.1" study area, author mentioned that two study area (roads) has been selected, while at the end of the section he/she mentioned third study area!!!. so, they are two or three areas??? please clarify.

6- Section "2.3" and "2.4", author lacks to clearly explain data question and 3D reconstruction process!! he/she did not provide sensible justification of some in-process steps such as how does "SFM" works, and based on what "Agisoft Metashape" automatically reconstruct the orthophoto?? furthermore, there is lacks in references.

7- Section "2.5", firstly, how dataset customization done? please explain clearly.
secondly, briefly explain what is "kaggle" means, as some readers still dont have an ideas about it and how could be useful as an Online community platform for data and machine learning.

8- Section "2.6" and "2.7", author again lacks to provide clear explanation of the work procedure as he/she mainly conducted two algorithms and unfortunately couldn't explain it well. researchers need to understand scientifically mathematical model of those two main algorithms. so, author should re-write those two sections in very careful and sensible way and should add the mathematical concept of those algorithms operations.

9- Section "2.8", author should provide more clear explanation about "annotation and labeling" process. he/she need to provide good justification for example why (id-class, bounding box center and width and height) are exclusively selected?? does there some other relevant parameters that should be considered as well?? why??

10- Section "2.9" Why:
a) "DarkNet" network has been particularly used as a model training environment in this study?
b) learning rate configuration was set to 0.001?
c) 6000 iterations were performed? what will happens if no. of iterations are less or more than 6000 were performed?

Furthermore, In the last three lines of this section, author mentioned "we saved the model after

Dear Reviewer...

Thank you very much for reviewing this paper. Please indicate your final decision concerning this paper by choosing one of the options from the menu next to this box.

- ☐ Accept, no revision needed
- ☐ Accept, but needs minor revision
- ☑ Accept, but needs major revision
- ☐ Reject, poor quality/out of scope

If you have decided that the paper needs revision, should it be sent to you again for a second round of evaluation?

No