

Review of: "CNN-Based Road Damage Detection"

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Potential competing interests: No potential competing interests to declare.

The objective of the research is to propose a road damage identification model using deep learning. It is an important research topic that contributes to improving road infrastructure maintenance.

I suggest the following modifications for publication.

1. The paper needs to be better written. The authors should explain more clearly and concisely. Also, some discussions do not cover the purpose of the paper. For example, the abstract discusses the accuracy of deep learning models, but the main paragraph does not. In addition, many figures have no explanation, and it is unclear what they are trying to explain. The authors need to review the descriptions again.
2. Chapter 3.1 contains a minimal discussion of deep learning. It is necessary to indicate what the authors want to insist on in this study.
3. The authors should describe the dataset in Table 1 in detail. For example, who classified the roads into these four categories, and how? What are the various types of roads? Also, the authors should provide details regarding pavement methods and road standards.
4. The F1-score of the training model varied from 0.4 to 0.82. Figure 3 shows that it varies widely depending on the confidence threshold. The authors should describe which confidence level they set for the next step.
5. The chapter on model implementation infers that the model was validated using a training model. However, there is no discussion of accuracy. The authors should discuss accuracy to show the effectiveness of the learning model. There is no explanation of Figures 7 through 10.
6. The authors should clarify what they are trying to insist on. If the authors want to argue the model's validity, they should mention the accuracy. Alternatively, if the authors want to develop the contents of the data acquisition system, they should reconsider the structure of the entire paper.