

Review of: "CNN-Based Road Damage Detection"

Abhishek Mukhopadhyay¹

¹ Ashok Leyland (India)

Potential competing interests: No potential competing interests to declare.

I would request the authors to go through each of the comments to improve the overall quality of the work.

Abstract:

1. Correct the phrase: "In picture recognition tasks.."
2. Do not use vague words like extremely, various. Be specific and quantify the terms. Write clearly how many types of classes authors considered.

Introduction

1. Please restructure the statement: ".... Recent advancement in technology, such as"
2. "....Among the different neural networks"--- It is a wrong statement. Researchers showed excellency of DNN on ILSVRC in the last decade, around 2013-14. And authors are suggested not to use the term "CNN model." Be specific and write that. If it is a vanilla architecture, write that only.
3. Write down 2-3 points on the contributions of the work at the end of the Introduction. Add one paragraph stating the structure of the paper.

Literature Survey

1. While citing someone's work, do not mention all authors' names. If one author, use the surname. If two, use both surnames. If more than two authors, write the first author's surname et al. For example, Kumar et al.
2. Add one summary paragraph stating what the limitations of current works are and how this work contributes to those limitations.
3. Authors are also suggested to review the following paper and cite it as this work is relevant to the paper and for challenging environments.

1. Mukhopadhyay, A. and Biswas, P., 2024. Advancements in Deep-Learning-Based Object Detection in Challenging Environments. Wireless World Research and Trends Magazine, pp.1-6.

Proposed Methodology

1. Give justification behind selecting the YOLOv5 model among many other models. Check the following article and cite it to justify the selection of YOLOv5 as your target model

1. Mukhopadhyay, A., Talwar, N.R., Viswakarma, H., Rajshekar Reddy, G.S., Srivastava, S., Pena-Rios, A. and Biswas, P., 2024. VR digital twin of office space with computer vision-based estimation of room occupancy and power consumption. *Discover Analytics*, 2(1), p.6.
2. Do not use the phrase "photos" in a technical paper. Use "images" instead.
3. Please check the grammatical inconsistency throughout the paper. Here you are using the future tense, although you used it already. Write in the present or past tense. Only future work should be in the future tense.
4. The source of the dataset should be clear, or the data sources should be public so that others can repeat the study and reproduce the same results.
5. Figures 4, 5, and 6 do not have any impact. Please use a graph showing the accuracy of the model on each class.
6. What is the annotation tool the authors used?
7. Do not put screenshots as images (Figures 8 and 9). Put them side by side and label them properly.
8. Figure 10 is clearly an indication of the wrong way of writing a paper. Authors must check other papers to see how they put images. Here, Figure 10 is directly a screenshot. Authors should remove them and put only the graphs.

Overall, I would suggest a complete rewrite to increase the visibility of the work.