Review of: "An Intelligent Analytics for People Detection Using Deep Learning"

Nikhil Marriwala[1]

1 Kurukshetra University

Potential competing interests: No potential competing interests to declare.

This paper presents an interesting comparison of deep learning models for people behavior detection. However, several major revisions are necessary.

1. How does the performance of CNN, YOLO, and Faster RCNN vary in detecting different types of behaviors (e.g., walking, sitting, running) mentioned in the study?
2. What specific metrics were used to evaluate and compare the performance of the three deep learning algorithms beyond accuracy?
3. How does the study address the challenge of detecting behaviors in low-light or complex environmental conditions?
4. What preprocessing techniques were applied to the video sequences to enhance the performance of the deep learning models?
5. How does the real-time performance of these models compare to their performance on pre-recorded video sequences?
6. What specific attributes of body language and posture were considered in the behavior detection framework, and how were they quantified?
7. How does the study account for potential biases in the training data, particularly regarding diverse human subjects and environments?
8. What measures were taken to ensure the ethical use of the behavior detection technology, especially in surveillance applications?
9. How scalable are these models for processing multiple video streams simultaneously in a real-world application?
10. What specific improvements or modifications were made to the standard CNN, YOLO, and Faster RCNN architectures for this particular application of behavior detection?
11. The paper needs a more detailed explanation of the dataset used, including its size, diversity, and how it was collected or sourced.
12. While accuracy is mentioned, a broader range of performance metrics (e.g., precision, recall, F1-score) should be included for a more comprehensive comparison.
13. More details on the hardware used, training parameters, and any data augmentation techniques applied would be beneficial.
14. A more in-depth analysis of why certain models performed better for specific behaviors or conditions is needed.
15. The paper should include a critical discussion of the limitations of the study and the proposed approach.

16. Given the sensitive nature of behavior detection, a section addressing ethical implications and potential misuse is crucial.
17. Include a comparison with other state-of-the-art methods beyond the three discussed.
18. Expand on how these models would perform in real-world scenarios with varying conditions.
19. Provide more specific directions for future research based on the findings and limitations of this study.
20. Include more visual aids (e.g., confusion matrices, ROC curves) to better illustrate the performance differences between the models.