Review of: "Comparing YOLOv8 and Mask RCNN for object segmentation in complex orchard environments"

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Potential competing interests: No potential competing interests to declare.

This paper provides a comprehensive comparison between the one-stage YOLOv8 and the two-stage Mask R-CNN models for instance segmentation in agriculture, particularly in orchard automation. The authors present a well-structured experiment with two datasets representing different orchard conditions, demonstrating YOLOv8's superiority in terms of accuracy and efficiency.

The discussion on the robustness of the models under varying environmental conditions, such as changes in lighting, weather, or the presence of occlusions needs to be expanded. Description of figure 10 is not clear, and needs more discussion. The literature review can be expanded including review of similar studies on similar orchard conditions such as in grapes or Mangoes.