

REVIEWER'S REPORT

Manuscript No.: IJAR-59560

Title: AI-Enabled Proactive Safety Intervention in Oil & Gas and Construction Projects: A Human-Supervised Predictive Risk Review.

Recommendation:

Accept as it is
Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity		✓		
Significance	✓			

Reviewer Id: JPR-369

Reviewer's Comment for Publication.

The manuscript addresses an important and timely topic by examining the role of artificial intelligence in proactive safety management across construction and oil and gas projects. The proposed human-supervised predictive safety intelligence framework provides a useful structure for integrating data acquisition, contextualization, model inference, risk assessment, human validation, intervention, and feedback learning. The discussion of computer vision, predictive analytics, asset integrity, natural-language processing, sensor analytics, and lifecycle governance is relevant and highlights the importance of maintaining human accountability in safety-critical decisions. However, minor revisions are required to improve the methodological transparency and overall presentation. The authors should clarify the literature-selection process by providing more detail on the number of records initially identified, the screening stages, and the final selection criteria, where these records are available. The quality-appraisal procedure would also benefit from a clearer explanation of how the six assessment dimensions were applied across the selected studies. Furthermore, the distinction between predictive model performance and demonstrated improvements in actual safety outcomes should be maintained consistently throughout the discussion. The authors should address the substantial repetition in Section 5, particularly the duplicated discussion of uncertainty, human oversight, model governance, and lifecycle assurance. Table 1 and Table 2 should be reformatted to correct incomplete or misplaced entries and improve readability. The figures should also be checked to ensure that the framework stages and maturity pathway are clearly presented and adequately explained in the text. Finally, the authors should verify the consistency of in-text citations and references, correct minor formatting and typographical issues, and strengthen the discussion of how the proposed framework could be evaluated through prospective, multi-site field studies. Addressing these points would improve the manuscript's methodological clarity, coherence, and practical value.