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REVIEWER'S REPORT

Manuscript No.: IJAR-56073

Title: AI Driven Forecast Error Assessment models for drilling in oil and Gas.

Recommendation:

Accept as it is .....

Accept after minor revision Yes

Accept after major revision .....

Do not accept (*Reasons below*).....

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

Reviewer Name: Dr. Bharti Bisht

Detailed Reviewer'sReport

The manuscript presents a comprehensive and technically detailed investigation into AI-driven forecast error assessment models for drilling operations in the oil and gas industry, clearly articulating the motivation, research gap, methodological framework, and engineering relevance of shifting from accuracy-centric prediction to uncertainty-oriented analytics; the literature review is extensive and well-structured, the methodology is logically designed with robust data preprocessing, feature engineering, ensemble and neural-network modeling, scenario-based error classification, quarterly forecasting logic, and weighted aggregation through MEGs, and the results convincingly demonstrate the superiority of AI-based error assessment over conventional approaches in capturing nonlinear interactions, operational regime shifts, and concept drift while improving decision support and risk awareness; however, the manuscript would benefit from clearer justification of dataset size and sources, more explicit validation procedures, statistical comparison metrics between baseline and proposed models, sensitivity analysis of hyperparameters, and stronger discussion of generalizability beyond the presented case application, along with minor language polishing and reduction of repetitive phrasing in several sections, after which the study would make a valuable contribution to drilling engineering analytics and AI-enabled operational risk management and is recommended for publication following minor revisions.