



International Journal of Multidisciplinary Conference Proceedings

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AI-Driven Healthcare Transformation: Enhancing Diagnostic Accuracy and Patient Outcomes in Resource-Constrained Settings

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KEYWORDS	ABSTRACT
Artificial Intelligence, Healthcare Transformation, Medical Diagnostics, Telemedicine, Machine Learning	The integration of artificial intelligence (AI) in healthcare systems represents a paradigm shift in medical diagnostics, treatment planning, and patient care management, particularly in resource-constrained environments. This paper explores the transformative potential of AI technologies in addressing critical healthcare challenges faced by developing nations, where limited access to specialized medical expertise and diagnostic infrastructure creates significant barriers to quality healthcare delivery. The study also highlights successful case implementations where AI-enhanced clinical decision support systems have reduced medical errors by 35% and improved patient outcomes by 42%. This research contributes to the broader discourse on digital transformation in healthcare by demonstrating that AI technologies, when thoughtfully implemented with stakeholder engagement and appropriate training programs, can serve as powerful catalysts for achieving universal health coverage and advancing sustainable development goals in the digital era.
ARTICLE HISTORY	
Date of Publication:30-10-2025	
Conference Organizer(s)	
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Volume-Issue-Page Number	3(1) 24
Citation	Batool, A., Naeem, H., Doultana, H. S. A., Fatima, Z., & Muneeb.(2025). AI-Driven Healthcare Transformation: Enhancing Diagnostic Accuracy and Patient Outcomes in Resource-Constrained Settings. <i>Proceedings of the 2nd International Conference on Artificial Intelligence, Social Transformation, and Scientific Progress (ICASST-2025), International Journal of Multidisciplinary Conference Proceedings</i> , 3(1).