

## Editorial Comments Volume 3 Issue 5

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Volume 3, Issue 5 of the *Journal of Computers, Mechanical, and Management* showcases an exciting array of research addressing significant technological, medical, financial, and educational challenges. The articles in this issue offer innovative solutions and frameworks that are poised to advance their respective fields while contributing to societal progress.

J. Jai Jaganath Babu *et al.* [1] investigate the critical issue of speckle noise in ultrasound imaging, a persistent challenge that compromises diagnostic accuracy. Their study introduces a hybrid despeckling method that combines Stick filters with Fourth-Order Partial Differential Equations (PDE), achieving a remarkable balance between noise reduction and edge preservation. Through an extensive evaluation using metrics such as the Peak Signal-to-Noise Ratio (PSNR) and the Structural Similarity Index (SSI), the hybrid method demonstrates superior performance compared to traditional filters. By enhancing image clarity in clinical scenarios, such as thyroid nodule analysis, this research provides a robust framework to improve diagnostic precision. The study also highlights the potential for optimizing these algorithms for real-time applications, paving the way for a larger clinical adoption.

In a comprehensive exploration of the role of the financial sector in promoting sustainability, Peehoo Jain *et al.* [2] delve into how FinTech innovations align with the United Nations' Sustainable Development Goals (SDGs). Their thematic analysis underscores the transformative potential of FinTech in fostering financial inclusion, enabling green finance, and advancing responsible investments. The study emphasizes the pivotal role of technologies such as blockchain, artificial intelligence, and InsurTech in enhancing transparency, resilience, and sustainability. By systematically linking FinTech advancements with specific SDGs, this research provides valuable insights for policymakers and industry stakeholders. It also identifies key challenges, such as regulatory constraints and scalability, and offers strategies for leveraging FinTech as a catalyst for sustainable development.

Nilakshman Sooriyaperakasam *et al.* [3] present a comparative analysis of random forest (RF) and logistic regression (LR) models to predict heart attack risk. Their study addresses critical gaps in current research by focusing on model interpretability and the challenges posed by imbalanced medical datasets. While both RF and LR demonstrate comparable accuracy, the authors highlight their complementary strengths: RF's ability to capture non-linear relationships and LR's efficiency in handling linear correlations and interpretability. This work not only advances the application of machine learning in healthcare but also emphasizes the importance of tailored approaches to optimize predictive performance in clinical settings.

D. Linett Sophia *et al.* [4] examines the transformative potential of virtual reality (VR) and augmented reality (AR) in education. Their mini-review highlights how these technologies foster immersive and interactive learning environments, making abstract concepts more accessible and engaging. By integrating VR and AR into curricula, educators can address diverse learning needs and create inclusive educational experiences. The article also discusses barriers to adoption, such as high costs and technical challenges, and proposes solutions, including open source tools and professional training for educators. This work underscores the importance of strategic planning and cross-sector collaboration in harnessing the full potential of VR and AR to revolutionize education.

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The research presented in this issue reflects the journal's commitment to addressing pressing global challenges through interdisciplinary approaches. From improving medical diagnostics and financial sustainability to advancing machine learning and educational technologies, these articles demonstrate the power of innovation to drive progress. The authors thank the authors for their invaluable contributions and the reviewers for their critical insights. We invite readers to explore this issue, which offers a wealth of knowledge and inspiration for researchers, practitioners, and policymakers alike.

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