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Editorial Comments Volume 4 Issue 1

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Volume 4, Issue 2 of the Journal of Computers, Mechanical, and Management features a trio of research papers that exemplify how technology is reshaping modern healthcare. These studies span innovations in remote patient monitoring, non-invasive diagnostics, and artificial intelligence applications for medical image analysis. Janani V.L. et al. [1] present the "Visual Health Track Monitor," an IoT-enabled device designed to remotely track vital signs like SpO2, pulse rate, and body temperature. The system integrates the MAX30100 and MLX90614 sensors with Bluetooth communication to a mobile application, enabling real-time alerts for abnormal readings. Validated through volunteer testing, the device demonstrated accuracy and usability, especially in scenarios requiring minimal physical contact such as pandemics. This solution enhances telemedicine capabilities and paves the way for AI-assisted monitoring in future versions. V. Mythily et al. [2] explore a non-invasive method for monitoring blood glucose levels using breath acetone analysis. The proposed system employs the TGS822 gas sensor alongside environmental sensors (DHT11 and BMP180) to ensure accurate calibration. Real-time data transmission and display are facilitated through IoT components. Tested on diabetic and non-diabetic individuals, the prototype achieved an average accuracy of 98%, making it a compelling alternative to conventional glucose monitoring. The approach contributes meaningfully to diabetes care through increased comfort and remote accessibility. S.K. Mydhili et al. [3] develop a smart application for early diagnosis of diabetic retinopathy. The study focuses on extracting retinal features such as microaneurysms and exudates, and classifying them using support vector machine (SVM) models. Implemented on an Android platform, the application supports AI-based diagnostics with high sensitivity and specificity. It enhances patient-provider communication and provides healthcare professionals with rapid decision-making tools. The system's scalability and potential integration with teleophthalmology platforms highlight its real-world applicability. These contributions reflect the journal's ongoing mission to support interdisciplinary solutions at the intersection of computing, medical diagnostics, and intelligent systems. The editorial board appreciates the authors for their original research and the reviewers for their valuable feedback. We encourage our readers to engage with the studies presented in this issue, which offer innovative pathways toward a more connected, data-driven, and patient-centered healthcare future.

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