1.	Record Nr.	UNINA9911064753403321
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	Titolo	Biomedical Engineering Science and Technology : Third International Conference, ICBEST 2025, Raipur, India, April 10–11, 2025, Revised Selected Papers / / edited by Bikesh Kumar Singh, Ganesh Ram Sinha, Gourav Modanwal
	Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2026
	ISBN	3-032-14908-8
	Edizione	[1st ed. 2026.]
	Descrizione fisica	1 online resource (930 pages)
	Collana	Communications in Computer and Information Science, , 1865-0937 ; ; 2635
	Altri autori (Persone)	Singh
	Disciplina	006.3
	Soggetti	Artificial intelligence
		Machine learning
		Application software
		Computer networks
		Artificial Intelligence
		Machine Learning
		Computer and Information Systems Applications
		Computer Communication Networks
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	-- A Novel Approach for Diabetic Retinopathy Detection with Class Imbalanced Datasets. -- 3D Modeling and Analysis in OCT-Angiography: Enhancing Diabetic Retinopathy Diagnosis and Vascular Assessment. -- A Novel Framework for ECG Signal Analysis. -- A Review of the Dissolution Models for Drug-Encapsulated Polymers. -- A Study on Hemodynamics of Brain Prefrontal Cortex During Visuospatial. -- Advancing Virtual Reality as Assistive Technology for Dementia Care with Neural Radiance Fields. -- AI-Enabled Automated Strabismus Detection and Corneal Deviation. -- Arterial study of diabetic and healthy subjects using ECG and PPG signals. -- Assessment of arterial stiffness in type-2 diabetes using Photoplethysmogram signals. -- Attention-Driven U-Net Models for Accurate Brain Tumor Segmentation. -- Breast Cancer Detection Using

Metaheuristic Algorithms: A Comparative Study. -- Chemiluminescence Sensing with Smartphone for Bio Marker Detection in Biomedical Applications. -- Comparative Investigation of Ti-6Al-4V and CoCr Alloys Acetabular Shells on Stability during Routine Activities- A Computational Approach. -- Deep Insights in Brain Tumour Classification using Deep Learning and Explainable AI Tools. -- Deep Learning Based Framework for Medical Image Authentication and Tampering Detection. -- Deep Learning based Multi-Class Classification of Dental Diseases using OPG Images. -- Design of Orthosis for Ankle Inversion Injuries. -- Evaluation of Antitubercular Drug Release Kinetics from Polylactic Acid - Polyethylene Glycol Diblock Nano-Carriers. -- Eye Movement-Based Wheelchair Control with Emotion Detector and Obstacle Detection. -- Hydrogen Sensors: A Review. -- Is the Current GSR Dataset Sufficient for Learning for Visually Impaired Persons? A Physiological Perspective. -- Menger-based bone scaffold design and mechanical analysis. -- Multimodal Fusion Framework for Accurate Insomnia Detection. -- Neurodegenerative Diseases: Understanding Risk Factors, Preventive Measures and the Significance of Early Detection and Neurorehabilitation. -- Optimized DenseNet-Based Plant Disease Detection and Multiclass Classification. -- Optimizing MRI-Based Brain Tumor Classification: A Study on Model Efficiency and Accuracy. -- Organ-Specific Cancer Diagnosis: A Machine Learning-Based GUI Approach. -- Parkinson's Disease Detection using Transfer Learning based Autoencoder model. -- Prediction Of Liver Stiffness Using Elastographic Images Fibroscan. -- Principal Component Analysis for Pattern Recognition and Characterization of Homeopathy Dilutions. -- Protocol for Integrating VR Therapy in Post-Stroke Up-per Limb Rehabilitation. -- Review of a Sensor-Based Method for Monitoring Exhaled Methane for Gut Health Assessment. -- Utilizing Deep learning and Quantum techniques for precision Skin Cancer diagnosis using Histopathological and Genomic data. -- Design and Development of Robotic Arm for Tele-Surgical and Diagnostic Applications. -- Development Of Ultrasound-Mediated Transdermal Drug Delivery System. -- IoT-Integrated Ultrasonic Cleaning System for Enhanced Efficiency and Sustainability. -- Analysis of Ethnic Disparities in Autism Spectrum Disorder among Toddlers. -- Generating fECG using CGAN for improving performance of deep neural networks. -- Multi-Class Classification of Eye Disease Using Fundus Images. -- Multimodal Emotion and Stress Recognition Using EEG and ECG: A Machine Learning Approach with Explainable AI. -- Enhanced Multilingual Medical Knowledge Extraction and Disease Diagnosis with Optimized Large Language Models. -- Attention U-Net and CNN-Based Hybrid Models for Precise Brain Tumor Segmentation on BraTS. -- A Novel Wearable Neckband for Sleep Apnea Monitoring and Diagnosis. -- Enhancing COVID-19 Detection through Chest CT Imaging with Xception Deep Learning. -- Intravenous Bag Monitoring and Alert System - A Prototype. -- Voice Pathology Detection Using Phonation. -- A.I.D: An Experiment to assist clinicians in evidence-based treatment plans. -- Development of 3D Printed Life Size Replica of a Bone from CT Scan Data. -- Investigation of human hepatotoxicity linked to the environ-mental contaminant 4-MBC by network toxicology and mo-lecular docking methodologies. -- DWT based Classification of Children with Dyslexia from normal by using SVM classifier on EEG Signals. -- Deep Learning Approaches for Multi-Class Gastrointestinal Disease Detection.

| Sommario/riassunto | This book constitutes the revised selected papers of the Third International Conference on Biomedical Engineering Science and |

Technology, ICBEST 2025, held in Raipur, India, during April 10-11, 2025. The 51 full papers presented in this book were carefully reviewed and selected from 112 submissions. The papers focus on the following domains: artificial intelligence in healthcare, computational mechanics in healthcare, and health informatics.