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Nota di contenuto	Understanding Healthcare 5.0 and Emerging Technologies -- Fundamentals of Federated Learning: Principles and Applications -- Data Privacy Challenges in Artificial Intelligence-Driven Healthcare -- Regulatory Frameworks: HIPAA, GDPR, and Compliance in Federated Learning -- Real Time Patient Monitoring and IOMT Applications -- Integration of Blockchain Technology for Ensuring Trust and Security in the Digital Health Market: A Comprehensive Review -- The Convergence of Federated Learning for the Digital Healthcare Market: An Overview -- Differential Privacy and Homomorphic Encryption in Healthcare Artificial Intelligence -- Analysis of Consumer Emotions Impacted By COVID-19 -- Guiding The Development of AI In Healthcare Through Ethical Considerations and Effective Governance -- Intelligent Workforce Management in Healthcare 5.0: Redefining HR Through Federated Learning -- The Legal Labyrinth of Smart Wearable Medical Devices: A Literary Overview -- From Traditional to Intelligent: Transforming Global Health Care through Innovation -- Ethical Considerations of Emotion AI used in the Synthetic Media Generations

and Applications -- Machine Learning-Based Prediction of Gene-Disease Associations for Reliable Evidence -- Addressing Computational Overhead in Federated Learning Models in Healthcare 5.0 and Beyond -- Robustness Against Adversarial Attacks and Model Security in Healthcare 5.0 and Beyond.-Scalable Model Aggregation and Interoperability Solutions in Healthcare Systems -- Federated Learning for Decentralized Healthcare: Privacy, Efficiency, and Scalability in Healthcare 5.0 -- Federated Learning Architectures: Centralized Vs. Decentralized Models In Human Resource(HR) -- A Two-staged Optimized Stacking Ensemble learning Classifier for the Prediction of Cervical Cancer -- AI-Assisted Histopathological Image Analysis for Automated Gastric Cancer Detection -- Robotics and AI-Powered Surgical Interventions in Gastric Cancer: Enhancing Precision and Efficacy of Oncologic Treatment24. Electronic Health Records using Blockchain -- Centralized vs. Decentralized Federated Learning Architectures: Design Trade-offs, Security, and Performance in Healthcare 5.0 Applications -- Navigating Healthcare 5.0: How Emerging Technologies Are Transforming Care Delivery and Medical Innovation -- Identification of Stress in IT Professionals Using Convolutional Neural Network -- Federated Learning for Precision Medicine: A Blockchain Enhanced Framework for Privacy Preserving Predictive Analytics in Healthcare 5.0 -- Machine Learning Advancements for Diabetes Prediction with LightGBM -- Blockchain Integration for Enhanced Trust and Security in Federated Learning for Healthcare 5.0 -- Ontology-Based Data Harmonization and Federated Transfer Learning: Enabling Scalable and Interoperable Intelligence in Healthcare 5.0 for Next-Generation Healthcare -- Future Trends in Federated Learning for Next-Generation Healthcare -- Advancing Federated Learning in Healthcare 5.0 -- A Futuristic Pathway in Healthcare -- Federated Learning in Healthcare Finance: A Systematic Review of Privacy-Preserving Models -- AI-Induced Digital Addiction: Its Impact on Human Relationships within Healthcare 5.0 Ecosystems -- Real-Time Detection of Latent Infections Using LSTM and IoMT-Based Health Monitoring -- Federated Learning and Healthcare 5.0: Paving the Road Ahead for Privacy-Preserving Smart Health Systems -- Neuro-Symbolic Federated Learning Models for Diagnostic Intelligence in Healthcare 5.0 -- Reducing Computational Overhead in Federated Learning: A Comprehensive Analysis -- Future Trends in Federated Learning: Enabling Secure and Personalized Healthcare Solutions.

Sommario/riassunto

This book introduces a novel integration of Federated Learning with the vision of Healthcare 5.0 to enable secure, adaptive, and intelligent health systems. It presents cutting-edge frameworks that support decentralized model training across medical institutions while preserving patient privacy and ensuring compliance with data regulations. Focusing on real-world use cases, such as predictive diagnostics, edge-based patient monitoring, personalized medicine, and surgical robotics, it bridges theoretical advances with practical implementations. This book provides deep insights into the design of scalable, privacy-preserving artificial intelligence infrastructures suited for cross-institutional collaboration. It is designed for artificial intelligence researchers, digital health architects, healthcare technologists, and policy advisors. This supports the development of human-centric, resilient, and interoperable smart healthcare ecosystems.