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Nota di contenuto	Introduction to AI-empowered Medical Soft [1] ware: Recent Advances and Challen -- Personalized Nutrition Applications using Biomarkers and Machine Learning -- Blood Exam Classification for Predicting Defin [1] ing Factors in Metabolic Syndrome Diagnosis using Sup [1] port Vector Machine -- Extreme Value Analysis applied in Dietary Data -- Iterative Microservices Approach for Explain [1] able and Reliable AI in Medical Application -- Challenges in Regulating and Validating AI [1] Driven Healthcar -- Framework for AI Explainability Leveraging User Acceptance and Health Literacy Models.
Sommario/riassunto	The book delves into advancements in personalized medicine, highlighting the transition from generalized treatments to tailored strategies through AI and machine learning. It first emphasizes the role of biomarkers in training predictive models and neural networks,

enhancing disease diagnosis and patient management. It then explores AI-driven healthcare systems, particularly the use of microservices to improve scalability and management. Additionally, it examines regulatory challenges, the need for AI explainability, and the PINXEL framework, which defines explainability requirements using the technology acceptance model (TAM) and the diffusion of innovation theory (DOI). Furthermore, the book evaluates the capabilities of large language models, including ChatGPT and GPT-4V, in medical applications, with a focus on diagnosis and structured assessments in general pathology. Lastly, it introduces an AI-powered system for primary care diagnosis that integrates language models, machine learning, and rule-based systems. The interactive AI assistants “Med/Primary AI assistant” and “Dermacen Analytica” leverage natural language processing, image analysis, and multi-modal AI to enhance patient interactions and provide healthcare professionals with high-accuracy, personalized diagnostic support. By taking a holistic approach, the book underscores the integration of AI into healthcare, aiming to support medical professionals in patient diagnosis and management with precision and adaptability.

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