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Autore	Singh Tanu	
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Unveiling the Black Box: Exploring Explainable AI in Education - Trends, Challenges, and Future Directions -- Equitable Education and Sustainable Learning: A Literary Exploration Of Integration Of Artificial Intelligence In Education For SDGs Advancement -- A Study of the Histories of People for Gerontology through Steps of Artificial Intelligence in Text Book -- Supremely Explainable Artificial Intelligence (XAI) in Education 5.0: Articulating Constructive Alignment in Teaching Learning Practices -- ARTIFICIAL INTELLIGENCE IN THE TEACHING OF NATURAL SCIENCES ON THE THRESHOLD OF THE FIFTH INDUSTRIAL REVOLUTION -- Navigating the Evolving Landscape of Personalized Learning in AIED: Recent Trends and Innovations -- Reshaping Education through AI: A Progressive Model for Developing Economies -- Innovative Pedagogical Practices through the Development and Design of EFL Teaching Materials Tailored to Sustainability through AI in the Digital Revolution -- The Dynamic Impact of Neuroscience and Artificial Intelligence on Education -- Transformative Pedagogy: A Comprehensive Framework for AI Integration in Education -- AI-Powered Proctoring: Safeguarding Online Assessment in the Education 5.0 -- An MTCNN-Based Attendance Monitoring System Powered by Inception-ResNet-v1.

| Sommario/riassunto | "Explainable AI for Education: Recent Trends and Challenges" is a comprehensive exploration of the intersection between artificial intelligence (AI) and education. In this book, we delve into the critical need for transparency and interpretability in AI systems deployed within educational contexts. Key Themes Understanding AI in Education: We provide a concise overview of AI techniques commonly used in educational settings, including recommendation systems, personalized learning, and assessment tools. Readers will gain insights into the potential benefits and risks associated with AI adoption in education. The Black-Box Problem: AI models often operate as "black boxes," making it challenging to understand their decision-making processes. We discuss the implications of this opacity and emphasize the importance of explainability. Explainable AI (XAI) Techniques: From rule-based approaches to neural network interpretability, we explore various methods for making AI models more transparent. Examples and case studies illustrate how XAI can enhance educational outcomes. Ethical Considerations: As AI becomes more integrated into education, ethical dilemmas arise. We address issues related to bias, fairness, and accountability, emphasizing responsible AI practices. Future Directions: Our book looks ahead, considering the evolving landscape of AI and its impact on education. We propose research directions and practical steps to promote XAI adoption in educational institutions. |