1. Record Nr. UNINA9911019779603321 Tyagi Amit Kumar Autore Titolo Next Generation Data Science and Blockchain Technology for Industry 5. 0 : Concepts and Paradigms Newark:,: John Wiley & Sons, Incorporated,, 2025 Pubbl/distr/stampa ©2025 **ISBN** 1-394-24520-3 1-394-24519-X 1-394-24521-1 Edizione [1st ed.] Descrizione fisica 1 online resource (497 pages) Soggetti Industry 5.0 Artificial intelligence - Industrial applications Blockchains (Databases) - Industrial applications Big data - Industrial applications Electronic data processing - Distributed processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Cover -- Half Title Page -- Title Page -- Copyright -- Contents -- List Nota di contenuto of Contributors -- Preface -- Acknowledgements -- 1: Introduction to Industry 5.0 and Society 5.0 -- 2: Blockchain Technology - Basics -- 3: Quantum Computing - The Future of Artificial Intelligence in the Era of Industry 5.0 -- 4: Big Data Analytics for Industry 5.0 -- 5: Data Science for Industry 5.0: Approaches, Challenges, and Applications -- 6: Privacy Protection in Cloud Using ECC System for Industry 5.0 - A Comparative Analysis -- 7: Cloud, Fog, and Edge Computing for Industry 5.0 -- 8: Augmented Reality and Virtual Reality for Industry 5.0 -- 9: Convergence of Fog, Edge, and Cloud in Industry 5.0 -- 10: Dew Computing for Industry 5.0 -- 11: Multilingual Motion-Based Sign Language (M2BSL) Recognition and Translation Using LSTM Deep Learning Model -- 12: Artificial Intelligence, Computer Vision, and

Robotics for Industry 5.0 -- 13: Transformative Effects of Emerging Technologies on Industry 5.0 and Society 5.0: Current Status, Vision, Issues, Challenges, and Opportunities for Future -- 14: Comparison of

the Performance of Machine Learning Methodologies Oriented to the Industry 5.0 Paradigm -- 15: AI-Enabled Techniques for Assisting the Ensemble of Web Application Firewall and Rule-based Intrusion Detection System for Industry 5.0's Applications -- 16: Artificial Intelligence-Based Smart Traffic Surveillance System for Vehicles -- 17: Advanced Topic for Future Research -- Index -- EULA.

Sommario/riassunto

"In this smart era, business innovation and industrial intelligence are making the way for a smart future in which smart factories, intelligent machines, networked processes, edge computing, blockchain technology, and Big Data (including Data Science) are combined to improve industrial growth. Today's we are moving forward to industry 4.0 and required intelligent, effective and reliable (trusted) solutions for society 5.0. Both industry 5.0 and society 5.0 are the necessity component for each other. In other words, without smart people or innovation ideas, we cannot think about smart solutions for industry 4.0. The maturity and growth of instrumentation, monitoring and automation as key technology drivers support Industry 5.0 (and society 5.0) as a viable, competent and actionable business model"-- Provided by publisher.