1. Record Nr. UNINA9910799232803321

Autore	Shastri Apoorva S
Titolo	Machine Learning and Optimization for Engineering Design / / edited by Apoorva S. Shastri, Kailash Shaw, Mangal Singh
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	9789819974566 9819974569
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (175 pages)
Collana	Engineering Optimization: Methods and Applications, , 2731-4057
Altri autori (Persone)	ShawKailash SinghMangal
Disciplina	006.31
Soggetti	Machine learning Engineering design Mathematical optimization Machine Learning Engineering Design Optimization
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Development of Smart Home System Based on IoT Using a Wearable EEG -- Chapter 2: Design of Intelligent ICT Irrigation System using Crop Growth Big Data Analysis -- Chapter 3: LRBC-E: A Structurally Enhanced LRBC-Based Block Cipher for Securing Extremely Contraind IoT Devices -- Chapter 4: OpenCV and MQTT based Intelligent Traffic Management System -- Chapter 5: A Machine Learning Model for Student's Academic Success Prediction.
Sommario/riassunto	This book aims to provide a collection of state-of-the-art scientific and technical research papers related to machine learning-based algorithms in the field of optimization and engineering design. The theoretical and practical development for numerous engineering applications such as smart homes, ICT-based irrigation systems, academic success prediction, future agro-industry for crop production, disease classification in plants, dental problems and solutions, loan eligibility processing, etc., and their implementation with several case studies and literature reviews are included as self-contained chapters.

Additionally, the book intends to highlight the importance of study and effectiveness in addressing the time and space complexity of problems and enhancing accuracy, analysis, and validations for different practical applications by acknowledging the state-of-the-art literature survey. The book targets a larger audience by exploring multidisciplinary research directions such as computer vision, machine learning, artificial intelligence, modified/newly developed machine learning algorithms, etc., to enhance engineering design applications for society. State-of-the-art research work with illustrations and exercises along with pseudo-code has been provided here.