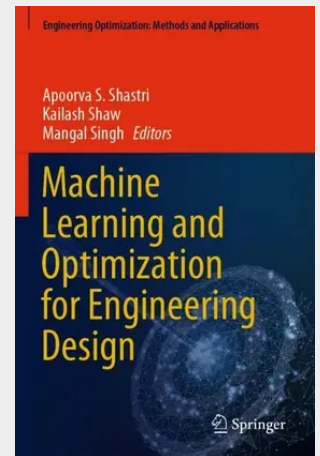


Machine Learning and Optimization for Engineering Design

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.

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