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Sommario/riassunto

SIMULATION TECHNIQUES OF DIGITAL TWIN IN REAL-TIME APPLICATIONS The book gives a complete overview of implementing digital twin technology in real-time scenarios while emphasizing how this technology can be embedded with running technologies to solve all other issues. Divided into two parts with Part 1 focusing on simulated techniques in digital twin technology and Part 2 on real-time applications of digital twin technology, the book collects a significant number of important research articles from domain-specific experts. The book sheds light on the various techniques of digital twin technology that are implemented in various application areas. It emphasizes error findings and respective solutions before the actual event happens. Most of the features in the book are on the implementation of strategies in real-time applications. Various real-life experiences are taken to show the proper implementation of simulation technologies. The book shows how engineers of any technology can input their research ideas to convert to real scenarios by using replicas. Hence, the book has a collection of research articles from various engineers with expertise in different technologies from many regions of the world. It shows how to implement the embedded real-time data into technologies. Specifically, the chapters relate to the auto landing and cruising features in aerial vehicles, automated coal mining simulation strategy, the enhancement of workshop equipment, and implementation in power energy management for urban railways. This book also describes the coherent mechanism of digital twin technologies with deep neural networks and artificial intelligence. Audience Researchers, engineers, and students in computer science, software engineering and industrial engineering, will find this book to be very useful.