1. Record Nr. UNINA9911019180103321

Autore	Vohra Manisha
Titolo	Introduction to Extended Reality (XR) Technologies
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2025 ©2025
ISBN	9781119857716 1119857716 9781119857693 1119857694 9781119857709 1119857708
Edizione	[1st ed.]
Descrizione fisica	1 online resource (222 pages)
Disciplina	006.8
Soggetti	Mixed reality
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Section 1: Introduction to Extended Reality -- 1 Extended Reality: A Conceptual Description 3 N. Rajamurugu and S. Yaknesh -- 2 Characteristics, Benefits, and an Explicative Insight on Extended Reality (XR) 17 Manisha Vohra -- 3 Different Uses of Extended Reality 37 Manisha Vohra -- Section 2: Fundamentals of Extended Reality -- 4 Introduction to Augmented Reality and Virtual Reality 63 S.N. Kumar and S. Suresh -- 5 Augmented Reality, Virtual Reality, Mixed Reality: A Comprehensive Description 89 J. Prakash -- 6 Possibilities with Augmented Reality and Virtual Reality 113 Anant Kumar Patel -- Section 3: Applications of Extended Reality -- 7 Applications of Extended Reality Technologies in Aviation Sector 129 N. Rajamurugu, J. Anbarasi and S. Yaknesh -- 8 Extended Reality Applications in Tourism Sector 143 Pedro Pablo Chambi Condori -- 9 Role of Augmented Reality and Virtual Reality in Medical Imaging 157 S.N. Kumar, A. Lenin Fred, Ajay Kumar H., L. R. Jonisha Miriam, I. Christina Jane, Parasuraman Padmanabhan and Balazs Gulyas -- Section 4: Future Developments of Extended Reality -- 10 An Overview of Virtual Reality in Healthcare 175 Pavithra S., Vanithamani R. and Judith Justin -- 11

Augmented and Mixed Reality in Education Sector 189 Prakash J. -- 12 The Growth of Extended Reality 205 Venkatesh Iyengar, Vanishree Pabalkar and Samaya Pillai -- References -- Index.

Sommario/riassunto

This book is a comprehensive overview of the fundamentals and applications of extended reality (XR) with practical insights and real-world examples. Introduction to Extended Reality (XR) Technologies is a thorough guide to understanding the fundamentals, concepts, and key aspects of XR technology, including augmented reality (AR), virtual reality (VR), and mixed reality (MR). The book explores how extended reality blends the physical and virtual worlds, transforming industries such as education, healthcare, and entertainment. Each chapter covers key aspects, from foundational principles to practical applications, with real-world examples illustrating the technologies' potential. By addressing current trends, challenges, and future directions, the book serves as an essential resource to explore the evolving world of these technologies. This book comprises 12 chapters, each presenting an in-depth overview of extended reality (XR) technologies. The first section details an introduction to extended reality technologies, covering augmented reality (AR), virtual reality (VR), and mixed reality (MR), and how they're rapidly growing across various industries. The second section examines the potential of these technologies and how they'll revolutionize different sectors, like aviation and tourism. The section also includes discussions on specific applications of XR technologies and the development advantages for each sector. The third section discusses how augmented reality and virtual reality play a pivotal role in healthcare sectors, allowing for disease diagnosis and treatment planning. Audience This book is intended for engineers, IT industry professionals, healthcare industry professionals, computer engineering and the electronics sector.