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Metaverse for Industry 5.0

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Preface

This book provides a thorough overview of the metaverse as it appears in Industry 5.0. The concept of the Metaverse is in line with Web 4.0, as shown in Industry 5.0. This is a digital ecosystem where organizations and individuals collaborate in a human-centric manner. As a result, it aids in creating personalized value for businesses. This virtual universe, which connects numerous interrelated worlds, enables real-time interactions between users and computer-generated environments. The goal of Industry 5.0's Metaverse is to promote innovation while enhancing performance, effectiveness, and general wellbeing. The main metaverse elements include artificial intelligence (AI), virtual reality (VR), augmented reality (AR), mixed reality (MR), and the Internet of Things (IoT), which provide customized and value-driven solutions. This book investigates the concept of the Metaverse in the context of Industry 5.0, highlighting its definition, evolution, benefits, drawbacks, technological advancement, challenges, opportunities, ethical issues, and integration into various sectors such as healthcare, construction, manufacturing, and others. The book reveals the following areas: HR in the metaverse—the progress needed to transform HR; the benefits of the metaverse for HR; the maximizing HR potential in the metaverse vs its limitations and challenges; people and machines in harmony; the relationship between the metaverse and industry 5.0; the technologies involved in the industrial metaverse; the motivation behind the integration of the metaverse with Industry 5.0; Web2 to Web3—the changing face of digital privacy; the challenges facing cybersecurity in the metaverse; the industrial metaverse—the transforming businesses: real-world use cases; and the potential of the metaverse in manufacturing, construction and healthcare sector. Change is inevitable, and with the changing trends of the market, companies must adopt newer versions of methodologies and make updates in every function of businesses so that they can enjoy a large share of productivity and profitability. To be competitive and sustained in market adaptation, the changing face of business is the prime particular.

The main objective of this book is to increase organizational efficiency by emphasizing the best modern methods in the functional areas of a business. The intended audience of this book includes academicians, researchers, research scholars, and

industry people who stand to benefit significantly from its contents. Business management students (undergraduate and postgraduate) and engineering students who are interested in producing new products, services, concepts, and potential solutions through metaverse technology are also target audiences. The content applies to the business leaders who bring changes and confront challenges in every sphere of action.

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