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Yousef Farhaoui
Editor

Artificial Intelligence, Big Data, IOT and Block Chain in Healthcare: From Concepts to Applications

Volume 2

 Springer

Editor

Yousef Farhaoui
Department of Computer Science
Moulay Ismail University
Errachidia, Morocco

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Preface

“Artificial Intelligence, Big Data, IoT & Blockchain: From Concepts to Applications” is a comprehensive exploration of the transformative potential of cutting-edge technologies in shaping various aspects of our lives. This expansive book delves into the core concepts and practical applications of artificial intelligence (AI), big data, Internet of things (IoT), and blockchain, elucidating their profound impact on industries, societies, and economies worldwide.

At its essence, AI represents the pinnacle of human ingenuity, enabling machines to simulate human-like intelligence and perform tasks that traditionally require human cognition. Through advanced algorithms and data-driven insights, AI holds the promise of revolutionizing industries ranging from healthcare and finance to transportation and entertainment.

Big data, on the other hand, refers to the vast volumes of structured and unstructured data generated in our digital age. Harnessing the power of big data analytics allows organizations to extract valuable insights, identify trends, and make informed decisions at an unprecedented scale. From personalized marketing strategies to predictive maintenance in manufacturing, the applications of big data are virtually limitless.

The Internet of things (IoT) further extends the reach of interconnected devices, enabling seamless communication and data exchange between physical objects and digital systems. By embedding sensors and connectivity into everyday objects, IoT facilitates automation, optimization, and enhanced user experiences across diverse domains, including smart homes, healthcare monitoring, and industrial automation.

Meanwhile, blockchain technology introduces a paradigm shift in trust and decentralization, offering transparent and immutable ledgers for recording transactions securely. Originally conceived as the underlying technology for cryptocurrencies like Bitcoin, blockchain has evolved to disrupt various industries, from supply chain management and voting systems to intellectual property rights and decentralized finance (DeFi).

Throughout this book, readers will embark on a journey that traverses the theoretical foundations, practical implementations, and future prospects of these transformative technologies. Through insightful discussions, real-world case studies, and expert perspectives, readers will gain a comprehensive understanding of AI, big data, IoT, and blockchain and their role in driving innovation, fostering economic growth, and addressing societal challenges in the digital age.

Whether you’re a seasoned professional seeking to deepen your knowledge or a curious enthusiast eager to explore the frontiers of technology, “Artificial Intelligence, Big Data, IoT & Blockchain: From Concepts to Applications” serves as an indispensable guide to navigating the dynamic landscape of modern innovation. Dive into this captivating exploration and discover the limitless possibilities that await in the realms of AI, big data, IoT, and blockchain.

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