Digital Intelligence What Every Smart Manager Must Have For Success In An Information Age

The hidden costs of artificial intelligence, from natural resources and labor to privacy and freedom What happens when artificial intelligence saturates political life and depletes the planet? How is AI shaping our understanding of ourselves and our societies? In this book Kate Crawford reveals how this planetary network is fueling a shift toward undemocratic governance and increased inequality. Drawing on more than a decade of research, award-winning science, and technology, Crawford reveals how AI is a technology of extraction: from the energy and minerals needed to build and sustain its infrastructure, to the exploited workers behind "automated" services, to the data AI collects from us. Rather than taking a narrow focus on code and algorithms, Crawford offers us a political and a material perspective on what it takes to make artificial intelligence and where it goes wrong. While technical systems present a veneer of objectivity, they are always systems of power. This is an urgent account of what is at stake as technology companies use artificial intelligence to reshape the world.
"Machines who think—how utterly preposterous," huff beleaguered humanists, defending their dwindling turf. "Artificial Intelligence—it's here and about to surpass our own," crow techno-visionaries, proclaiming dominion. It's so simple and obvious, each side maintains, only a fanatic could disagree. Deciding where the truth lies between these two extremes is the main

purpose of John Haugeland's marvelously lucid and witty book on what artificial intelligence is all about. Although presented entirely in non-technical terms, it neither oversimplifies the science nor evades the fundamental philosophical issues. Far from ducking the really hard questions, it takes them on, one by one. Artificial intelligence, Haugeland notes, is based on a very good idea, which might well be right, and just as well might not. That idea, the idea that human thinking and machine computing are "radically the same," provides the central theme for his illuminating and provocative book about this exciting new field. After a brief but revealing digression in intellectual history, Haugeland systematically tackles such basic questions as: What is a computer really? How can a physical object "mean" anything? What are the options for computational organization? and What structures have been proposed and tried as actual scientific models for intelligence? In a concluding chapter he takes up several outstanding problems and puzzles—including intelligence in action, imagery, feelings and personality—and their enigmatic prospects for solution. Do you wonder what the coming years hold for Artificial Intelligence? Discover how technological breakthroughs will change your world. Are you worried that AI will steal your job? Do you fear you ' ll get left behind in the data-driven marketplace? Are you concerned about AI disrupting your life? Digital expert, speaker, and internationally recognized thought leader Lasse Rouhiainen has educated countless future-focused crowds in conferences around the world. Now he ' s here to demystify the AI revolution and show you how this inevitable technology will help humankind produce cheaper, faster, and better than ever. Artificial

Intelligence: 101 Things You Must Know Today About Our Future is a complete introduction to how emergent technologies impact every aspect of business, society, and humanity. Addressing the hottest topics in AI from self-driving cars, to chatbots and robotic healthcare, Rouhiainen ' s comprehensive information answers your burning questions and addresses obvious fears. Armed with practical tools and strategies, you ' ll learn how to best prepare for an extraordinary wave of innovation. In Artificial Intelligence: 101 Things You Must Know Today About Our Future, you ' ll discover: - Chatbots, robots, other automated functions, and how these will revolutionize society - Which industries will be disrupted and how to forward-plan - How new jobs emerge and what skills you ' ll need to take advantage of them - Why ethical standards and re-education are crucial for a modern workforce - Charts, visual guides, and infographics to expand your understanding and much, much more! Artificial Intelligence: 101 Things You Must Know Today About Our Future is your essential roadmap to guide you into the next generation. If you like straightforward explanations of complex issues, broad-ranging applications, and real-world examples, then you ' ll love Lasse Rouhiainen ' s detailed resource. Buy Artificial Intelligence to examine this major tech upheaval today!

As technology continues to saturate modern society, agriculture has started to adopt digital computing and data-driven innovations. This emergence of " smart " farming has led to various advancements in the field, including autonomous equipment and the collection of climate, livestock, and plant data. As connectivity and data management continue to revolutionize the farming industry, empirical research is a necessity for

understanding these technological developments. Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture provides emerging research exploring the theoretical and practical aspects of critical technological solutions within the farming industry. Featuring coverage on a broad range of topics such as crop monitoring, precision livestock farming, and agronomic data processing, this book is ideally designed for farmers, agriculturalists, product managers, farm holders, manufacturers, equipment suppliers, industrialists, governmental professionals, researchers, academicians, and students seeking current research on technological applications within agriculture and farming.

How to Stay Smart in a Smart World

Revolutionizing Industrial Automation Through the Convergence of Artificial Intelligence and the Internet of Things

Explainable Artificial Intelligence for Smart Cities

Building Intelligent Enterprises

Artificial Intelligence in Business Management

On Games, Intelligence, and Artificial Intelligence

The concept of a "smart city" is used widely in general; however, it is hard to explain because of the complexity and multidimensionality of this notion. However, the essential qualification for being a smart city is to achieve "sustainable social, environmental, and economic development" and boost the living standards of society based on Information and Communication Technology (ICT) and Artificial intelligence (AI). AI in smart cities has become an important aspect for cities that face great challenges to make smart decisions for social well-being, particularly cybersecurity and corporate sustainability. In this context, we aim to contribute literature with a value-added approach where various AI applications of smart cities are discussed from a different

perspective. First, we start by discussing the conceptual design, modeling, and determination of components for the sustainability of a smart city structure. Since smart cities operate on spatial-based data, it is important to design, operate, and manage smart city elements using Geographical Information Systems (GIS) technologies. Second, we define the structure, type, unit, and functionality of the layers to be placed on the GIS to achieve best practices based on Industry 4.0 components. Transportation is one of the key indicators of smart cities, so it is critical to make transportation in smart cities accessible for different disabled groups by using AI technologies. Third, we demonstrate what kinds of technologies should be used for which disabled groups in different transportation vehicles with specific examples. Finally, we create a discussion platform for processes and sub-processes such as waste management, emergency management, risk management, and data management for establishing smart cities including the financial and ethical aspects.

With the development of innovative technologies, the study of industrial automation is obtaining extraordinary attention from academia, governments, researchers, and various industrial communities. The technical innovations in advanced technologies such as deep learning, blockchain, artificial intelligence of things (AIOT), and more have unlocked the potential for bringing intelligent automation and efficiency to the industries to control their various operations. These new technologies provide an efficient and secure way for industries to manage and develop products intelligently. Revolutionizing Industrial Automation Through the Convergence of Artificial Intelligence and the Internet of Things includes the recent advancements in exploring and developing AIOT-powered strategies and mechanisms for future industrial automation and transforming industrial functions and architectures to help improve various industrial operations. Covering topics such as convolutional neural networks, smart urban logistics, and industrial automation, this premier reference source is

an excellent resource for computer scientists, IT managers, engineers, business leaders and executives, logistics managers, students and faculty of higher education, libraries, researchers, and academicians.

This book continues the discussion of the effects of artificial intelligence in terms of economics and finance. In particular, the book focuses on the effects of the change in the structure of financial markets, institutions and central banks, along with digitalization analyzed based on fintech ecosystems. In addition to finance sectors, other sectors, such as health, logistics, and industry 4.0, all of which are undergoing an artificial intelligence induced rapid transformation, are addressed in this book. Readers will receive an understanding of an integrated approach towards the use of artificial intelligence across various industries and disciplines with a vision to address the strategic issues and priorities in the dynamic business environment in order to facilitate decision-making processes. Economists, board members of central banks, bankers, financial analysts, regulatory authorities, accounting and finance professionals, chief executive officers, chief audit officers and chief financial officers, chief financial officers, as well as business and management academic researchers, will benefit from reading this book. .

Digital transformation continues to create new growth opportunities for businesses and improve the lives of citizens. To help businesses seize these opportunities, the Infocomm Media Development Authority (IMDA) launched the Digital Economy Framework for Action in 2018. This living document aims to enhance Singapore's digital competitiveness and become a global node in Asia.As part of Singapore's push for a Digital Economy, IMDA and the Singapore University of Social Sciences have collaborated to jointly publish the Artificial Intelligence, Data and Blockchain in a Digital Economy, First Edition. This book explains how frontier technologies such as blockchain and artificial intelligence can empower Singapore's digital transformation. It also highlights and

provides insights on transformative services and how frontier technology can impact the nation's digitalisation journey.

Playing Smart

Artificial Intelligence for Smart Cities and Villages: Advanced Technologies, Development, and Challenges

7th International Conference, ICAIS 2021, Dublin, Ireland, July 19-23, 2021, Proceedings, Part III

How Most American, Asian, Latin, Indian and European Girls Are Raped Via Bio-Digital Social Programming from Socialism's Rape-Mi

Artificial Intelligence and the Future of Humanity

The Atlas of AI

This book collects papers on education quality assessment based on AI technology and introduces the latest research direction and progress of AI technology in the field of education and teaching, including classroom teaching quality assessment, online education quality assessment, teaching reflection quality assessment, etc. This book promotes the application of artificial intelligence technology in the field of education and teaching, effectively improving the quality of education and teaching. Researchers in artificial intelligence technology, teachers, students, and others benefit from this book.

Build smarter systems by combining

artificial intelligence and the Internet of Things—two of the most talked about topics today Key FeaturesLeverage the power of Python libraries such as TensorFlow and Keras to work with real-time IoT dataProcess IoT data and predict outcomes in real time to build smart IoT modelsCover practical case studies on industrial IoT, smart cities, and home automationBook Description There are many applications that use data science and analytics to gain insights from terabytes of data. These apps, however, do not address the challenge of continually discovering patterns for IoT data. In Hands-On Artificial Intelligence for IoT, we cover various aspects of artificial intelligence (AI) and its implementation to make your IoT solutions smarter. This book starts by covering the process of gathering and preprocessing IoT data gathered from distributed sources. You will learn different AI techniques such as machine learning, deep learning, reinforcement learning, and natural language processing to build smart IoT systems. You will also leverage the power of AI

to handle real-time data coming from wearable devices. As you progress through the book, techniques for building models that work with different kinds of data generated and consumed by IoT devices such as time series, images, and audio will be covered. Useful case studies on four major application areas of IoT solutions are a key focal point of this book. In the concluding chapters, you will leverage the power of widely used Python libraries, TensorFlow and Keras, to build different kinds of smart AI models. By the end of this book, you will be able to build smart AI-powered IoT apps with confidence. What you will learnApply different AI techniques including machine learning and deep learning using TensorFlow and KerasAccess and process data from various distributed sourcesPerform supervised and unsupervised machine learning for IoT dataImplement distributed processing of IoT data over Apache Spark using the MLLib and H2O.ai platformsForecast time-series data using deep learning methodsImplementing AI from case studies in Personal IoT,

Industrial IoT, and Smart CitiesGain unique insights from data obtained from wearable devices and smart devicesWho this book is for If you are a data science professional or a machine learning developer looking to build smart systems for IoT, Hands-On Artificial Intelligence for IoT is for you. If you want to learn how popular artificial intelligence (AI) techniques can be used in the Internet of Things domain, this book will also be of benefit. A basic understanding of machine learning concepts will be required to get the best out of this book.

This book presents research in artificial techniques using intelligence for energy transition, outlining several applications including production systems, energy production, energy distribution, energy management, renewable energy production, cyber security, industry 4.0 and internet of things etc. The book goes beyond standard application by placing a specific focus on the use of AI techniques to address the challenges related to the different

applications and topics of energy transition. The contributions are classified according to the market and actor interactions (service providers, manufacturers, customers, integrators, utilities etc.), to the SG architecture model (physical layer, infrastructure layer, and business layer), to the digital twin of SG (business model, operational model, fault/transient model, and asset model), and to the application domain (demand side management, load monitoring, micro grids, energy consulting (residents, utilities), energy saving, dynamic pricing revenue management and smart meters, etc.).

The convergence of Artificial Intelligence (AI) in blockchain creates one of the world's most reliable technology-enabled decision-making systems that is virtually tamper-proof and provides solid insights and decisions. The integration of AI and Blockchain affects many aspects from food supply chain logistics and healthcare record sharing to media royalties and financial security. It is imperative that regulatory standards

are emphasized in order to support positive outcomes from the integration of AI in blockchain technology. Regulatory Aspects of Artificial Intelligence on Blockchain provides relevant legal and security frameworks and the latest empirical research findings in blockchain and AI. Through the latest research and standards, the book identifies and offers solutions for overcoming legal consequences that pertain to the application of AI into the blockchain system, especially concerning the usage of smart contracts. The chapters, while investigating the legal and security issues associated with these applications, also include topics such as smart contacts, network vulnerability, cryptocurrency, machine learning, and more. This book is essential for technologists, security analysts, legal specialists, privacy and data security practitioners, IT consultants, standardization professionals, researchers, academicians, and students interested in blockchain and AI from a legal and security viewpoint.

Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture
Artificial Intelligence Applications to Smart City and Smart Enterprise
A Non-Technical Introduction
Artificial Intelligence Basics
Internet of Things, Artificial Intelligence and Blockchain Technology
Contracting and Contract Law in the Age of Artificial Intelligence

This book is intended for general managers and students who want to improve their digital intelligence or digital IQ. The book espouses the belief that digital intelligence is an important competence that global leaders need to have in today's economy to enhance the performance of their organizations. The book lays out the most basic competencies and skill sets for thinking about IT and IT-enabled changes that all managers should have. It articulates some of the dimensions of digital intelligence; yet because of the focus on general managers, it avoids details of technologies and implementation that should ideally be handled by trained IT professionals. It is not necessary for managers and entrepreneurs to have a programming or computer science background to acquire digital intelligence. It may surprise some that even Steve Jobs, one of the most successful technology entrepreneurs and executives, did not have a degree or background in computer science or programming. Steve is not alone; this is also true of many other "digital immigrants" who have made significant contributions to IT. If people without a technology background can be technology pioneers, such success should encourage everyone to embrace digital intelligence and use technology intelligently in business and life.

In this book, I will describe how Social Programming with a rape automation component works to hurt and damage young girls, woman, men, families, our entire society; effecting your physical health, mind, finances, and future ability to have a fulfilling life with higher opportunities. You will understand how to decode it, prevent it, counter it, and help eliminate it from your life and from society, in turn doing your part in making a better world. You will further understand a higher decoding, for which the Social Programming Institute (The SPI) has termed as Bio-Digital Social Programming, that is used in a hybrid way, penetrating your defenses in order to rape you in sub-conscious, unconscious and conscious automated ways. This rape is termed Bio-Digital Hybrid Sexual Assault, which penetrates your Bio-Digital Field and is rampant with Smart Phones, Apps, IoT devices and AI, utilizing a certain frequency that replicates in the human body, through your nervous system, cells, and even impacts your DNA. The mind of a rapist bio-digitally crosses through content provided by Hollywood, Media, Music, Dance and the Education System. This mind has been termed Rape-Mind, as we have discovered bio-metric technologies that show and decode its very building blocks comprised of bio-digital fields and bio-matter. The investigator at The SPI has invested more than 20 years of research on the Human Bio-Digital Network, with interviews of men that slept with 200 to 5,000 girls. Girls and women from young ages to very old were interviewed and the intelligence gathered incorporates scientific methods that include AI algorithms in conjunction with contemporary culture, media, industry, and issues related to mind-body health, growth and well-being. The victims are not simply girls or women, but all men as well. This is a must read for anyone interested in a meaningful relationship, and anyone who is a parent, a sister, a brother, a daughter, family, in law enforcement, in the tech industry, in education, in the media or government.

This book explores the concepts and techniques of IoT, AI, and blockchain. Also discussed is the possibility of applying blockchain

for providing security in various domains. The specific highlight of this book is focused on the application of integrated technologies in enhancing data models, better insights and discovery, intelligent predictions, smarter finance, smart retail, global verification, transparent governance, and innovative audit systems. The book allows both practitioners and researchers to share their opinions and recent research in the convergence of these technologies among academicians and industry people. The contributors present their technical evaluation and compare it with existing technologies. Theoretical explanation and experimental case studies related to real-time scenarios are also included. This book pertains to IT professionals, researchers and academicians working on fourth revolution technologies.

Cyber-physical systems (CPS) have emerged as a unifying name for systems where cyber parts (i.e., the computing and communication parts) and physical parts are tightly integrated, both in design and during operation. Such systems use computations and communication deeply embedded in and interacting with human physical processes as well as augmenting existing and adding new capabilities. As such, CPS is an integration of computation, networking, and physical processes. Embedded computers and networks monitor and control the physical processes, with feedback loops where physical processes affect computations and vice versa. The economic and societal potential of such systems is vastly greater than what has been realized, and major investments are being made worldwide to develop the technology. Artificial Intelligence Paradigms for Smart Cyber-Physical Systems focuses on the recent advances in Artificial intelligence-based approaches towards affecting secure cyber-physical systems. This book presents investigations on state-of-the-art research issues, applications, and achievements in the field of computational intelligence paradigms for CPS. Covering topics that include autonomous systems, access control, machine learning, and intrusion detection and prevention systems, this book is ideally designed for engineers, industry

professionals, practitioners, scientists, managers, students, academicians, and researchers seeking current research on artificial intelligence and cyber-physical systems.

Artificial Intelligence and Smart Agriculture Technology

What Every Smart Manager Must Have for Success in an Information Age

What Everyone Needs to Know

Artificial Intelligence and Heuristics for Smart Energy Efficiency in Smart Cities

Digital Intelligence

Advances in Artificial Intelligence and Security

Digital intelligence—the ability to understand and use the power of information technology—is becoming critical for organizations and managers to thrive in the global marketplace. The digital revolution is impacting almost every industry, functional area and business process, as shown by innovative market entrants such as Uber and Airbnb. Success in the digital economy will require leaders and managers to invest in their own digital intelligence and that of their teams to navigate ongoing transformations. Digital intelligence should form a key component of any organization's strategy to survive and compete effectively. Technical skills and knowledge are important in any dynamic and growing economy, but especially in economies like India, where technology provides a way to leapfrog competitors and accelerate growth. In such economies, managing and nurturing digital intelligence is not only key for economic success, but also necessary to achieve sustainable development for millions of consumers and workers at the base of the pyramid. This remarkable book, by an expert and leading scholar on digital strategy, tells you how to innovate

digitally and make your organization future-ready.
This book aims to provide readers with up-to-date knowledge on how to make these technologies smarter. Humanity is now going through difficult times to fight the Covid-19 pandemic. Simultaneously, in these difficult times of physical separation, we can also realize how much digital society technology helps us cope with many difficulties that bring us this time. The authors focus on selected research challenges for intelligent digital society and state-of-the-art methods of how to face them. The book's subtitle suggests that a core concept that the reader can study from various points of view in particular book chapters is the knowledge. The knowledge that can help us intelligently face different digital society challenges (Part I of this book); the knowledge extracted from available big data employing intelligent analysis techniques (Part II). For efficient processing and analysis of data, there is a strong need for smart data and information modeling techniques (Part III).
Are robots going to take my job? How are smartphones affecting my kids? Do I need to worry about privacy when I get online or ask Siri for directions? Whatever questions you have about AI, The Age of AI gives you insights on how to navigate this brand-new world as you apply God's ageless truths to your life and future. Alexa, how is AI changing our world? We interact with artificial intelligence, or AI, nearly every moment of the day without knowing it. From our Twitter and Facebook social media feeds to our online carts to smart thermostats and Alexa and Google Home, AI is everywhere. In The Age of AI, Jason Thacker--associate research fellow at the

Ethics and Religious Liberty Commission--helps us navigate our digital age in this thoughtful exploration of the social, moral, and ethical challenges of our ongoing interactions with artificial intelligence. Applying God's Word to this new AI-empowered age, The Age of AI shows us how Christian truth transforms how we use AI in order to love God and our neighbor better. It serves as a guide for those wary of technology's impact on our society and also for those who are enthusiastic about where AI is taking us. Jason explains how AI affects us individually, in our relationships, and in our society at large as he addresses AI's impact on our bodies, sexuality, work, economics, and privacy. With theological depth and a wide awareness of the current trends in AI, Jason is a steady guide reminding us that while AI is changing most things, it does not change the foundations of the Christian faith.

Smart cities operate under more resource-efficient management and economy than ordinary cities. As such, advanced business models have emerged around smart cities, which led to the creation of smart enterprises and organizations that depend on advanced technologies. This book includes 21 selected and peer-reviewed articles contributed in the wide spectrum of artificial intelligence applications to smart cities. Chapters refer to the following areas of interest: vehicular traffic prediction, social big data analysis, smart city management, driving and routing, localization, safety, health, and life quality.

The Very Idea

Artificial Intelligence and Smart Agriculture Applications

Artificial Intelligence Paradigms for Smart Cyber-Physical

Systems

Artificial Intelligence in Education and Teaching Assessment

How Artificial Intelligence and Spatial Computing Will Transform the Way We Communicate Forever

Expert machine learning and deep learning techniques for developing smarter IoT systems

An essential resource work for understanding how to design and develop smart applications for present and future problems of the field of agriculture.— Dr. Deepak Gupta, Maharaja Agrasen Institute of Technology, Delhi, India As a result of the advances in Artificial Intelligence (AI), many aspects of daily life have been transformed by smart digital technology. Advanced intelligent algorithms can provide powerful solutions to real-world problems. Smart applications have become commonplace. All areas of life are being changed by smart tools developed to deal with complex issues challenging both humanity and the earth. Artificial Intelligence and Smart Agriculture Applications presents the latest smart agriculture applications developed across the globe. It covers a broad array of solutions using data science and AI to attack problems facing agriculture worldwide. Features: Application of drones and sensors in advanced farming A cloud-computing model for implementing smart agriculture Conversational AI for farmer's advisory communications Intelligent fuzzy logic to predict global warming’s effect on agriculture Machine learning algorithms for mapping soil macronutrient elements variability A smart IoT framework for soil fertility enhancement AI applications in pest management A model using Python for predicting rainfall The book examines not only present solutions but also potential future outcomes. It looks at the role of AI-based algorithms and the almost infinite combinations of variables

for agricultural applications. Researchers, public and private sector representatives, agriculture scientists, and students can use this book to develop sustainable and solutions for smart agriculture. This book's findings are especially important as the planet is facing unprecedented environmental challenges from over-farming and climate change due to global warming.

This book provides original, diverse, and timely insights into the nature, scope, and implications of Artificial Intelligence (AI), especially machine learning and natural language processing, in relation to contracting practices and contract law. The chapters feature unique, critical, and in-depth analysis of a range of topical issues, including how the use of AI in contracting affects key principles of contract law (from formation to remedies), the implications for autonomy, consent, and information asymmetries in contracting, and how AI is shaping contracting practices and the laws relating to specific types of contracts and sectors. The contributors represent an interdisciplinary team of lawyers, computer scientists, economists, political scientists, and linguists from academia, legal practice, policy, and the technology sector. The chapters not only engage with salient theories from different disciplines, but also examine current and potential real-world applications and implications of AI in contracting and explore feasible legal, policy, and technological responses to address the challenges presented by AI in this field. The book covers major common and civil law jurisdictions, including the EU, Italy, Germany, UK, US, and China. It should be read by anyone interested in the complex and fast-evolving relationship between AI, contract law, and related areas of law such as business, commercial, consumer, competition, and data protection laws.

Deceptively powerful and stunningly beautiful, this monumental leap forward in conveying information effectively

has always been right there in front of us, waiting to be unlocked, hiding in plain sight. All it took was the convergence of human ingenuity, artificial intelligence, and the rise of a medium capable of magic.

The book discusses the evolution of future generation technologies through Internet of Things (IoT) in the scope of Artificial Intelligence (AI). The main focus of this volume is to bring all the related technologies in a single platform, so that undergraduate and postgraduate students, researchers, academicians, and industry people can easily understand the AI algorithms, machine learning algorithms, and learning analytics in IoT-enabled technologies. This book uses data and network engineering and intelligent decision support system-by-design principles to design a reliable AI-enabled IoT ecosystem and to implement cyber-physical pervasive infrastructure solutions. This book brings together some of the top IoT-enabled AI experts throughout the world who contribute their knowledge regarding different IoT-based technology aspects.

Case Study: Tipasa, Algeria

Artificial Intelligence: 101 Things You Must Know Today About Our Future

Artificial Intelligence-based Smart Power Systems

Artificial Intelligence-based Internet of Things Systems

RAPED Via BIO-DIGITAL SOCIAL PROGRAMMING

A Knowledge-based Approach

?The 3-volume set CCIS 1422, CCIS 1423 and CCIS 1424 constitutes the refereed proceedings of the 7th International Conference on Artificial Intelligence and Security, ICAIS 2021, which was held in Dublin, Ireland, in July 2021. The total of 131 full papers and 52 short papers presented in this 3-volume proceedings was carefully reviewed and selected from 1013 submissions.

The papers were organized in topical sections as follows: Part I: artificial intelligence; Part II: artificial intelligence; big data; cloud computing and security; Part III: cloud computing and security; encryption and cybersecurity; information hiding; IoT security.

This book was created with the intention of informing an international audience about the latest technological aspects for developing smart agricultural applications. As artificial intelligence (AI) takes the main role in this, the majority of the chapters are associated with the role of AI and data analytics components for better agricultural applications. The first two chapters provide alternative, wide reviews of the use of AI, robotics, and the Internet of Things as effective solutions to agricultural problems. The third chapter looks at the use of blockchain technology in smart agricultural scenarios. In the fourth chapter, a future view is provided of an Internet of Things-oriented sustainable agriculture. Next, the fifth chapter provides a governmental evaluation of advanced farming technologies, and the sixth chapter discusses the role of big data in smart agricultural applications. The role of the blockchain is evaluated in terms of an industrial view under the seventh chapter, and the eighth chapter provides a discussion of data mining and data extraction, which is essential for better further analysis by smart tools. The ninth chapter evaluates the use of machine learning in food processing and preservation, which is a critical issue for dealing with issues concerns regarding insufficient foud sources. The tenth chapter also discusses sustainability, and the eleventh chapter focuses on the problem of plant disease prediction,

which is among the critical agricultural issues. Similarly, the twelfth chapter considers the use of deep learning for classifying plant diseases. Finally, the book ends with a look at cyber threats to farming automation in the thirteenth chapter and a case study of India for a better, smart, and sustainable agriculture in the fourteenth chapter. This book presents the most critical research topics of today's smart agricultural applications and provides a valuable view for both technological knowledge and ability that will be helpful to academicians, scientists, students who are the future of science, and industrial practitioners who collaborate with academia.

Building Intelligent Enterprises by leveraging the emerging and next-generation technologies to accelerate the adoption of digital transformation The speed of innovation and emerging IT technologies are changing at a very fast pace and enterprises are eager to join the digital revolution so they can stand above the competition and succeed as the enterprise of tomorrow. This book is an attempt to make the enterprise intelligent by providing the path to digital transformation and the adoption of new IT methods, tools and technologies. This book has been organized to cover the following topics: Digital Transformation, Design Thinking, Agile, DevOps, Robotic Process Automation, Internet of Things, Artificial Intelligence, Machine Learning, Blockchain, Drones, Augmented and Virtual Reality, 3D Printing, Big Data, Analytics, Cloud Computing, APIs, and SAP Leonardo. No prior knowledge of any technical coding or language is necessary to understand the content of this book. End-

to-end storyline to accelerate the enterprise's digital transformation journey How an enterprise can stay relevant, compete, and perform in the digital economy How to leverage these technologies to build intelligent enterprises Understand and apply the emerging technologies across key business processes Industry-specific Use Cases for all technologies as a reference point to build the business case for implementation The book is very well suited towards the C-Suite executives, both IT and business leaders, directors and managers, project managers, solution architects, and all professionals who have an interest and desire to keep up-to-date with the latest technological trends, looking for a career change, want to help enterprise adapt and onboard the digital roadmap, or have an agenda to digitize key processes within the enterprise to make it intelligent.

ARTIFICIAL INTELLIGENCE-BASED SMART POWER SYSTEMS Authoritative resource describing artificial intelligence and advanced technologies in smart power systems with simulation examples and case studies Artificial Intelligence-based Smart Power Systems presents advanced technologies used in various aspects of smart power systems, especially grid-connected and industrial evolution. It covers many new topics such as distribution phasor measurement units, blockchain technologies for smart power systems, the application of deep learning and reinforced learning, and artificial intelligence techniques. The text also explores the potential consequences of artificial intelligence and advanced technologies in smart power systems in the

forthcoming years. To enhance and reinforce learning, the editors include many learning resources throughout the text, including MATLAB, practical examples, and case studies. Artificial Intelligence-based Smart Power Systems includes specific information on topics such as: Modeling and analysis of smart power systems, covering steady state analysis, dynamic analysis, voltage stability, and more Recent advancement in power electronics for smart power systems, covering power electronic converters for renewable energy sources, electric vehicles, and HVDC/FACTs Distribution Phasor Measurement Units (PMU) in smart power systems, covering the need for PMU in distribution and automation of system reconfigurations Power and energy management systems Engineering colleges and universities, along with industry research centers, can use the in-depth subject coverage and the extensive supplementary learning resources found in Artificial Intelligence-based Smart Power Systems to gain a holistic understanding of the subject and be able to harness that knowledge within a myriad of practical applications.

Why Human Intelligence Still Beats Algorithms

The Fourth Industrial Revolution: Implementation of Artificial Intelligence for Growing Business Success

Towards Digital Intelligence Society

Digital Transformation

Artificial Intelligence Techniques for a Scalable Energy Transition

Advances in Artificial Intelligence-based Technologies

This book features a selection of extended papers

presented at the 8th IFIP WG 12.6 International Workshop on Artificial Intelligence for Knowledge Management, AI4KM 2021, held in Yokohama, Japan, in January 2021, in the framework of the International Joint Conference on Artificial Intelligence, IJCAI 2020.* The 14 revised and extended papers presented together with an invited talk were carefully reviewed and selected for inclusion in this volume. They present new research and innovative aspects in the field of knowledge management and discuss methodological, technical and organizational aspects of artificial intelligence used for knowledge management. *The workshop was held virtually.

Artificial intelligence touches nearly every part of your day. While you may initially assume that technology such as smart speakers and digital assistants are the extent of it, AI has in fact rapidly become a general-purpose technology, reverberating across industries including transportation, healthcare, financial services, and many more. In our modern era, an understanding of AI and its possibilities for your organization is essential for growth and success. Artificial Intelligence Basics has arrived to equip you with a fundamental, timely grasp of AI and its impact. Author Tom Taulli provides an engaging, non-technical introduction to important concepts such as machine learning, deep learning, natural language

processing (NLP), robotics, and more. In addition to guiding you through real-world case studies and practical implementation steps, Taulli uses his expertise to expand on the bigger questions that surround AI. These include societal trends, ethics, and future impact AI will have on world governments, company structures, and daily life. Google, Amazon, Facebook, and similar tech giants are far from the only organizations on which artificial intelligence has had—and will continue to have—an incredibly significant result. AI is the present and the future of your business as well as your home life. Strengthening your prowess on the subject will prove invaluable to your preparation for the future of tech, and Artificial Intelligence Basics is the indispensable guide that you've been seeking. What You Will Learn Study the core principles for AI approaches such as machine learning, deep learning, and NLP (Natural Language Processing) Discover the best practices to successfully implement AI by examining case studies including Uber, Facebook, Waymo, UiPath, and Stitch Fix Understand how AI capabilities for robots can improve business Deploy chatbots and Robotic Processing Automation (RPA) to save costs and improve customer service Avoid costly gotchas Recognize ethical concerns and other risk factors of using artificial intelligence Examine the secular trends and how they may impact your business Who This Book Is For Readers without a

technical background, such as managers, looking to understand AI to evaluate solutions.
This book provides an insight into IoT intelligence in terms of applications and algorithmic challenges. The book is dedicated to addressing the major challenges in realizing the artificial intelligence in IoT-based applications including challenges that vary from cost and energy efficiency to availability to service quality in multidisciplinary fashion. The aim of this book is hence to focus on both the algorithmic and practical parts of the artificial intelligence approaches in IoT applications that are enabled and supported by wireless sensor networks and cellular networks. Targeted readers are from varying disciplines who are interested in implementing the smart planet/environments vision via intelligent wireless/wired enabling technologies. Includes the most up-to-date research and applications related to IoT artificial intelligence (AI); Provides new and innovative operational ideas regarding the IoT artificial intelligence that help advance the telecommunications industry; Presents AI challenges facing the IoT scientists and provides potential ways to solve them in critical daily life issues.
This book focuses on the implementation of AI for growing business, and the book includes research articles and expository papers on the applications of AI on decision-making, health care, smart universities, public sector and digital government,

FinTech, and RegTech. Artificial Intelligence (AI) is a vital and a fundamental driver for the Fourth Industrial Revolution (FIR). Its influence is observed at homes, in the businesses and in the public spaces. The embodied best of AI reflects robots which drive our cars, stock our warehouses, monitor our behaviors and warn us of our health, and care for our young children. Some researchers also discussed the role of AI in the current COVID-19 pandemic, whether in the health sector, education, and others. On all of these, the researchers discussed the impact of AI on decision-making in those vital sectors of the economy.

Power, Politics, and the Planetary Costs of Artificial Intelligence

Advanced Methods, Digital Technologies, Decision Support Tools, and Applications

Artificial Intelligence in IoT

Selected Papers in Honour of Professor Nikolaos G. Bourbakis—Vol. 1

Artificial Intelligence

Artificial Intelligence, Data And Blockchain In A Digital Economy, First Edition

Smart cities and villages have enhanced the quality of lives of residents. Various computer-assisted technologies have been harnessed for the development of smart cities and villages in order to provide solutions for common and niche urban problems. The development of smart environments

has been possible due on advances in computing power and artificial intelligence (AI) that have allowed the deployment of scalable technologies. Artificial Intelligence for Smart Cities and Smart Villages: Advanced Technologies, Development, and Challenges summarizes the role of AI in planning and designing smart solutions for urban and rural environments. This book is divided into three sections to impart a better understanding of the topics to readers. These sections are: 1) Demystifying smart cities and villages: A traditional perspective, 2) Smart innovations for rural lifestyle management solutions, and 3) Case studies. Through this book, readers will be able to understand various advanced technologies that are vital to the development of smart cities and villages. The book presents 15 chapters that present effective solutions to urban and rural challenges. Concepts highlighted in chapters include smart farms, indoor object classification systems, smart transportation, blockchains for medical information, humanoid robots for rural education, IoT devices for farming, and much more. This book is intended for undergraduate and graduate engineering students across all disciplines, security providers in the IT and related fields, and trainees working for infrastructure management companies. Researchers and consultants at all levels working in the areas of artificial intelligence, machine learning, IoT,

blockchain, network security, and cloud computing will also find the contents beneficial in planning projects involving smart environments.

A new vision of the future of games and game design, enabled by AI. Can games measure intelligence? How will artificial intelligence inform games of the future? In Playing Smart, Julian Togelius explores the connections between games and intelligence to offer a new vision of future games and game design. Video games already depend on AI. We use games to test AI algorithms, challenge our thinking, and better understand both natural and artificial intelligence. In the future, Togelius argues, game designers will be able to create smarter games that make us smarter in turn, applying advanced AI to help design games. In this book, he tells us how. Games are the past, present, and future of artificial intelligence. In 1948, Alan Turing, one of the founding fathers of computer science and artificial intelligence, handwrote a program for chess. Today we have IBM's Deep Blue and DeepMind's AlphaGo, and huge efforts go into developing AI that can play such arcade games as Pac-Man. Programmers continue to use games to test and develop AI, creating new benchmarks for AI while also challenging human assumptions and cognitive abilities. Game design is at heart a cognitive science, Togelius reminds us—when we play or design a game, we plan, think spatially, make

predictions, move, and assess ourselves and our performance. By studying how we play and design games, Togelius writes, we can better understand how humans and machines think. AI can do more for game design than providing a skillful opponent. We can harness it to build game-playing and game-designing AI agents, enabling a new generation of AI-augmented games. With AI, we can explore new frontiers in learning and play.

How to stay in charge in a world populated by algorithms that beat us in chess, find us romantic partners, and tell us to “turn right in 500 yards.” Doomsday prophets of technology predict that robots will take over the world, leaving humans behind in the dust. Tech industry boosters think replacing people with software might make the world a better place—while tech industry critics warn darkly about surveillance capitalism. Despite their differing views of the future, they all agree: machines will soon do everything better than humans. In How to Stay Smart in a Smart World, Gerd Gigerenzer shows why that’s not true, and tells us how we can stay in charge in a world populated by algorithms. Machines powered by artificial intelligence are good at some things (playing chess), but not others (life-and-death decisions, or anything involving uncertainty). Gigerenzer explains why algorithms often fail at finding us romantic partners (love is not chess), why self-driving cars fall prey to the Russian Tank

Fallacy, and how judges and police rely increasingly on nontransparent “black box” algorithms to predict whether a criminal defendant will reoffend or show up in court. He invokes Black Mirror, considers the privacy paradox (people want privacy, but give their data away), and explains that social media get us hooked by programming intermittent reinforcement in the form of the “like” button. We shouldn’t trust smart technology unconditionally, Gigerenzer tells us, but we shouldn’t fear it unthinkingly, either.
Over the coming decades, Artificial Intelligence will profoundly impact the way we live, work, wage war, play, seek a mate, educate our young, and care for our elderly. It is likely to greatly increase our aggregate wealth, but it will also upend our labor markets, reshuffle our social order, and strain our private and public institutions. Eventually it may alter how we see our place in the universe, as machines pursue goals independent of their creators and outperform us in domains previously believed to be the sole dominion of humans. Whether we regard them as conscious or unwitting, revere them as a new form of life or dismiss them as mere clever appliances, is beside the point. They are likely to play an increasingly critical and intimate role in many aspects of our lives. The emergence of systems capable of independent reasoning and action raises serious questions about just whose interests they are permitted to serve, and what limits our society

should place on their creation and use. Deep ethical questions that have bedeviled philosophers for ages will suddenly arrive on the steps of our courthouses. Can a machine be held accountable for its actions? Should intelligent systems enjoy independent rights and responsibilities, or are they simple property? Who should be held responsible when a self-driving car kills a pedestrian? Can your personal robot hold your place in line, or be compelled to testify against you? If it turns out to be possible to upload your mind into a machine, is that still you? The answers may surprise you.

Regulatory Aspects of Artificial Intelligence on Blockchain

The Age of AI

The Age of Smart Information

Hands-On Artificial Intelligence for IoT

Artificial Intelligence for Knowledge Management

Artificial Intelligence Perspective for Smart Cities

Thanks to rapid technological developments in terms of Computational Intelligence, smart tools have been playing active roles in daily life. It is clear that the 21st century has brought about many advantages in using high-level computation and communication solutions to deal with real-world problems; however, more technologies bring more changes to society. In this sense, the concept of smart cities has been a widely discussed topic in terms of society and Artificial Intelligence-oriented research efforts. The

rise of smart cities is a transformation of both community and technology use habits, and there are many different research orientations to shape a better future. The objective of this book is to focus on Explainable Artificial Intelligence (XAI) in smart city development. As recently designed, advanced smart systems require intense use of complex computational solutions (i.e., Deep Learning, Big Data, IoT architectures), the mechanisms of these systems become 'black-box' to users. As this means that there is no clear clue about what is going on within these systems, anxieties regarding ensuring trustworthy tools also rise. In recent years, attempts have been made to solve this issue with the additional use of XAI methods to improve transparency levels. This book provides a timely, global reference source about cutting-edge research efforts to ensure the XAI factor in smart city-oriented developments. The book includes both positive and negative outcomes, as well as future insights and the societal and technical aspects of XAI-based smart city research efforts. This book contains nineteen contributions beginning with a presentation of the background of XAI techniques and sustainable smart-city applications. It then continues with chapters discussing XAI for Smart Healthcare, Smart Education, Smart Transportation, Smart Environment, Smart Urbanization and Governance, and Cyber Security for Smart Cities.

This book emphasizes the role of micro-grid systems and connected networks for the strategic storage of energy through the use of information and communication techniques, big data, the cloud, and meta-heuristics to support the greed for artificial intelligence techniques in data and the implementation of global strategies to meet the challenges of the city in the broad sense. The intelligent management of renewable energy in the context of the energy transition requires the use of techniques and tools based on artificial intelligence (AI) to overcome the challenges of the intermittence of resources and the cost of energy. The advent of the smart city makes an increased call for the integration of artificial intelligence and heuristics to meet the challenge of the increasing migration of populations to the city, in order to ensure food, energy, and environmental security of the citizen of the city and his well-being. This book is intended for policymakers, academics, practitioners, and students. Several real cases are exposed throughout the book to illustrate the concepts and methods of the networks and systems presented. This book proposes the development of new technological innovations—mainly ICT—the concept of “Smart City” appears as a means of achieving more efficient and sustainable cities. The overall goal of the book is to develop a comprehensive framework to help public and private stakeholders make informed decisions

on smart city investment strategies and develop skills for assessment and prioritization, including resolution of difficulties with deployment and reproducibility.

With the 4th Industrial Revolution ongoing and human societal organization being restructured into, so-called, “Society 5.0”, the field of Artificial Intelligence and related technologies is growing continuously and rapidly, developing in both itself and towards applications in many other disciplines. Researchers worldwide aim at incorporating cognitive abilities into machines, such as learning and problem solving. When machines and software systems have been enhanced with Artificial Intelligence components, they become better and more efficient at performing tasks. Consequently, Artificial Intelligence stands out as a research discipline due to its worldwide pace of growth in both theoretical advances and areas of application, while achieving very high rates of success and promising major impact in science, technology and society. The book at hand aims at exposing its readers to some of the most significant Advances in Artificial Intelligence Theory, Tools and Methodologies as well as Artificial Intelligence-based Applications and Services. The book consists of an editorial note and an additional eleven (11) chapters, all invited from authors who work on the corresponding chapter theme and are recognized for their significant research

contributions. In more detail, the chapters in the book are organized into three parts, namely (i) Advances in Artificial Intelligence Tools and Methodologies, (ii) Advances in Artificial Intelligence-based Applications and Services, and (iii) Theoretical Advances in Computation and System Modeling. This research book is directed towards professors, researchers, scientists, engineers and students in Artificial Intelligence-related disciplines. It is also directed towards readers who come from other disciplines and are interested in becoming versed in some of the most recent Artificial Intelligence-based technologies. An extensive list of bibliographic references at the end of each chapter guides the readers to probe further into the application areas of interest to them.

The Impact of Artificial Intelligence on Governance, Economics and Finance, Volume 2

8th IFIP WG 12.6 International Workshop, AI4KM 2021, Held at IJCAI 2020, Yokohama, Japan, January 7–8, 2021, Revised Selected Papers