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Internet of Things, Smart Computing and Technology: A Roadmap Ahead
 Data Storytelling and Visualization with Tableau
 Internet of Things Integrated Augmented Reality
 Machine Learning for Environmental Monitoring in Wireless Sensor Networks
 Emerging Trends in Cloud Computing Analytics, Scalability, and Service Models
 Handbook of Research on Computational Intelligence Applications in Bioinformatics
 Development of Employability Skills Through Pragmatic Assessment of Student Learning Outcomes
 Prognostics and Health Management of Electronics
 Generative Adversarial Networks and Deep Learning
 Research Methodology
 Information Retrieval and Natural Language Processing
 Agile Manufacturing Systems
 Artificial Intelligence in Information and Communication Technologies, Healthcare and Education
 Basic Electronics
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 Role of ICT for Multi-Disciplinary Applications in 2030
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 Directory of Special Libraries and Information Centers
 Computer Architecture and Parallel Processing
 Handbook of Research on Applied Intelligence for Health and Clinical Informatics
 Privacy and Security Policies in Big Data
 Kinematics of Machinery
 The Pioneering Applications of Generative AI
 Mastering Drone Technology with AI
 Computational Approaches in Biotechnology and Bioinformatics
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GALVAN MATHEWS

Internet of Things, Smart Computing and Technology: A Roadmap Ahead IGI Global
 With the tremendous growth and availability of the data, this book covers understanding the data, while telling a story with visualization including basic concepts about the data, the relationship and the visualizations. All the technical details that include installation and building the different visualizations are explained in a clear and systematic way. Various aspects pertaining to storytelling and visualization are explained in the book through Tableau. Features Provides a hands-on approach in Tableau in a simplified manner with steps Discusses the broad background of data and its fundamentals, from the Internet of Everything to analytics Emphasizes the use of context in delivering the stories Presents case studies with the building of a dashboard Presents application areas and case studies with identification of the impactful visualization This book will be helpful for professionals, graduate students and senior undergraduate students in Manufacturing Engineering, Civil and Mechanical Engineering, Data Analytics and Data

Visualization.

Data Storytelling and Visualization with Tableau Technical Publications

This book presents the proceedings of the Third International Conference on Electrical Engineering and Control (ICEECA2017). It covers new control system models and troubleshooting tips, and also addresses complex system requirements, such as increased speed, precision and remote capabilities, bridging the gap between the complex, math-heavy controls theory taught in formal courses, and the efficient implementation required in real-world industry settings. Further, it considers both the engineering aspects of signal processing and the practical issues in the broad field of information transmission and novel technologies for communication networks and modern antenna design. This book is intended for researchers, engineers, and advanced postgraduate students in control and electrical engineering, computer science, signal processing, as well as mechanical and chemical engineering.

Internet of Things Integrated Augmented Reality BPB Publications

In recent years, technological advances have led to significant developments within a variety of business applications. In particular, data-driven research provides ample opportunity for enterprise

growth, if utilized efficiently. Privacy and Security Policies in Big Data is a pivotal reference source for the latest research on innovative concepts on the management of security and privacy analytics within big data. Featuring extensive coverage on relevant areas such as kinetic knowledge, cognitive analytics, and parallel computing, this publication is an ideal resource for professionals, researchers, academicians, advanced-level students, and technology developers in the field of big data.

Machine Learning for Environmental Monitoring in Wireless Sensor Networks CRC Press

This book aims at improving the mathematical modelling skills of users by enhancing the ability to understand, connect, apply and use the mathematical concepts to the problem at hand. This book provides the readers with an in-depth knowledge of the various categories/classes of research problems that professionals, researchers and students might encounter following which the applications of appropriate mathematical models is explained with the help of case studies. The book is targeted at academicians, researchers, students and professionals who belong to all engineering disciplines.

Emerging Trends in Cloud Computing Analytics, Scalability, and Service Models JEC PUBLICATION

This book offers a basic understanding of the Internet of Things (IoT), its design issues and challenges for healthcare applications. It also provides details of the challenges of healthcare big data, role of big data in healthcare and techniques, and tools for IoT in healthcare. This book offers a strong foundation to a beginner. All technical details that include healthcare data collection unit, technologies and tools used for the big data analytics implementation are explained in a clear and organized format.

Handbook of Research on Computational Intelligence Applications in Bioinformatics IGI Global

Agility has become very important for the industries today as the lifetimes of the products are continuously shrinking. This book provides an excellent opportunity for updating understanding of agile methods from the design, manufacturing and business process perspectives, whether one is an industrial practitioner, academic researcher engineer or business graduate student. This volume is a compilation of various important aspects of agility consisting of systemic considerations in manufacturing, agile software systems, agile business systems, agile operations research, flexible manufacturing systems, advanced manufacturing systems with improved materials and mechanical behavior of products, agile aspects of design, clean and green manufacturing systems, environment, agile defence systems.

Development of Employability Skills Through Pragmatic Assessment of Student Learning Outcomes IGI Global

The first book on Prognostics and Health Management of Electronics Recently, the field of prognostics for electronic products has received increased attention due to the potential to provide early warning of system failures, forecast maintenance as needed, and reduce life cycle costs. In response to the subject's growing interest among industry, government, and academic professionals, this book provides a road map to the current challenges and opportunities for research and development in Prognostics and Health Management (PHM). The book begins with a review of PHM and the techniques being developed to enable a prognostics approach for electronic products and systems. building on this foundation, the book then presents the state of the art in sensor systems for in-situ health and usage monitoring. Next, it discusses the various models and algorithms that can be utilized in PHM. Finally, it concludes with a discussion of the opportunities in future research. Readers can use the information in this book to: Detect and isolate faults Reduce the occurrence of No Fault Found (NFF) Provide advanced warning of system failures Enable condition-based (predictive) maintenance Obtain knowledge of load history for future design, qualification, and root cause analysis Increase system availability through an extension of maintenance cycles and/or timely repair actions Subtract life cycle costs of equipment from reduction in inspection costs, down time, and inventory Prognostics and Health Management of Electronics is an indispensable reference for electrical engineers in manufacturing, systems maintenance, and management, as well as design engineers in all areas of electronics.

Prognostics and Health Management of Electronics IGI Global

Integrating generative artificial intelligence (AI) into art, design, and media presents a double-edged sword. While it offers unprecedented creative possibilities, it raises ethical concerns, challenges traditional workflows, and requires careful regulation. As AI becomes more prevalent in these fields, there is a pressing need for a comprehensive resource that explores the technology's potential and navigates the complex landscape of its implications. The Pioneering Applications of Generative AI is a pioneering book that addresses these challenges head-on. It provides a deep dive into the evolution, ethical considerations, core technologies, and creative applications of generative AI, offering readers a thorough understanding of this transformative technology. Researchers, academicians, scientists, and research scholars will find this book invaluable in navigating the complexities of generative AI in art, design, and media. With its focus on ethical and responsible AI and discussions on regulatory frameworks, the book equips readers with the knowledge and tools needed to harness the full potential of generative AI while ensuring its responsible and ethical use.

Generative Adversarial Networks and Deep Learning CRC Press

This book gives a comprehensive view of graph theory in informational retrieval (IR) and natural language processing(NLP). This book provides number of graph techniques for IR and NLP applications with examples. It also provides understanding of graph theory basics, graph algorithms and networks using graph. The book is divided into three parts and contains nine chapters. The first part gives graph theory basics and graph networks, and the second part provides basics of IR with graph-based information retrieval. The third part covers IR and NLP

recent and emerging applications with case studies using graph theory. This book is unique in its way as it provides a strong foundation to a beginner in applying mathematical structure graph for IR and NLP applications. All technical details that include tools and technologies used for graph algorithms and implementation in Information Retrieval and Natural Language Processing with its future scope are explained in a clear and organized format.

Research Methodology Engineering Mechanics

DESCRIPTION "Mastering Drone Technology with AI" is a detailed guide to the transformational power of AI in drone technology. It investigates how AI is transforming numerous elements of drone operations, from navigation and flight automation to data analysis and decision-making processes. The book gives readers a thorough knowledge of cutting-edge advancements including Machine Learning, computer vision, and autonomous flight systems, making it an indispensable resource for anybody interested in the convergence of AI and unmanned aerial vehicles (UAVs). This book is a valuable resource for professionals in agriculture, logistics, surveillance, and environmental monitoring looking to integrate AI-powered drones into their work. It offers step-by-step guides and practical projects to help readers gain the skills needed to excel. By exploring the latest advancements and strategies, professionals can stay competitive in this rapidly evolving field. The book also covers safety and regulatory issues, ensuring that AI-equipped drones are used ethically and legally. By promoting a thorough awareness of both the theoretical and practical elements of AI in drone technology, the book enables professionals to innovate and lead in their respective sectors. KEY FEATURES ● Examine how AI transforms drones through advanced algorithms for navigation, automation, and data analysis. ● The book provides real-world examples of AI-enhanced drones in agriculture, logistics, and surveillance, along with insights into safety standards and regulations. ● It offers interactive learning through quizzes, case studies, and projects, plus resources for developers to create AI-powered drone solutions. WHAT YOU WILL LEARN ● Understand the basic components, types, and flying mechanisms of drones. ● Learn how AI enhances drone capabilities like object detection, navigation, and decision-making. ● Explore real-world uses of AI in drones for agriculture, surveillance, delivery, and environmental monitoring. ● Gain awareness of legal and ethical issues, including airspace regulations and privacy concerns. ● Get insights into future trends in drone technology and AI to stay ahead in this fast-growing industry. WHO THIS BOOK IS FOR The target audience for this book includes undergraduate students from diverse academic backgrounds, including engineering, life sciences, mathematics, and technology. Additionally, it is beneficial for drone enthusiasts, tech experts, students, educators, industry professionals, academics, entrepreneurs, and policymakers interested in integrating AI with drones for a variety of applications. TABLE OF CONTENTS 1. Introduction to Drones 2. Drone/UAV Design and Development 3. Quadrotors and Drone Programming 4. Drone Operations Optimizations 5. AI Integration in Drone Technology 6. Drone Security 7. Drones for Environmental Science 8. Drones for Smart Cities 9. Case Studies of Drone Applications 10. Future Trends in Drone Technology [Information Retrieval and Natural Language Processing](#) CRC Press

The theme of this book is "Role of ICT for multi-disciplinary applications in 2030", which is absolutely appropriate to explore with regard to the CONASENSE vision of looking at services utilizing the Communications, Navigation, Sensing and Services (CONASENSE) paradigm in a period of 20-50 years from now. The vision of CONASENSE society is to bring about active integration of the three worlds of communications, navigation and local/remote sensing - that have been apart for years require a multidisciplinary approach. This 4th Communication, Navigation, Sensing and Services (CONASENSE) book brings together in contributions from another society, namely, Global ICT Standardization Forum for India (GISFI). Technical topics discussed in the book include: • Wireless Sensor Networks• Advanced IoT and M2M• Future Space Communications Infrastructure• ICT Networks for CONASENSE in 2030• International ICT Research• Secure Vehicular Ad-Hoc Networks• Heterodox Networks• CONASENSE Innovation Era• CONASENSE at Nanoscale Thus the book provides a rich and interesting coverage of diverse aspects concerning multi-disciplinary applications.

Agile Manufacturing Systems John Wiley & Sons

This book comprehensively discusses diesel combustion phenomena like ignition delay, fuel-air mixing, rate of heat release, and emissions of smoke, particulate and nitric oxide. It enables quantitative evaluation of these important phenomena and parameters. Most importantly, it attempts to model them with constants that are independent of engine types and hence they could be applied by the engineers and researchers for a general engine. This book emphasizes the

importance of the spray at the wall in precisely describing the heat release and emissions for most of the engines on and off-road. It gives models for heat release and emissions. Every model is thoroughly validated by detailed experiments using a broad range of engines. The book describes an elegant quasi-one-dimensional model for heat release in diesel engines with single as well as multiple injections. The book describes how the two aspects, namely, fuel injection rate and the diameter of the combustion bowl in the piston, have enabled meeting advanced emission, noise, and performance standards. The book also discusses the topics of computational fluid dynamics encompassing RANS and LES models of turbulence. Given the contents, this book will be useful for students, researchers and professionals working in the area of vehicle engineering and engine technology. This book will also be a good professional book for practising engineers in the field of combustion engines and automotive engineering.

[Artificial Intelligence in Information and Communication Technologies, Healthcare and Education](#) IGI Global

Engineering mechanics is the branch of the physical science which describes the response of bodies or systems of bodies to external behaviour of a body, in either a beginning state of rest or of motion, subjected to the action of forces. It bridges the gap between physical theory and its application to technology. It is used in many fields of engineering, especially mechanical engineering and civil engineering. Much of engineering mechanics is based on Sir Issac Newton's laws of motion. Within the practical sciences, engineering mechanics is useful in formulating new ideas and theories, discovering and interpreting phenomena and developing experimental and computational tools. Engineering mechanics is the application of applied mechanics to solve problems involving common engineering elements. The goal of this engineering mechanics course is to expose students to problems in mechanics as applied to plausibly real-world scenarios. Problems of particular types are explored in detail in the hopes that students will gain an inductive understanding of the underlying principles at work; students should then be able to recognize problems of this sort in real-world situations and respond accordingly. Our hope is that this book, through its careful explanations of concepts, practical examples and figures bridges the gap between knowledge and proper application of that knowledge.

Basic Electronics CRC Press

This book contains 74 papers presented at ICTCS 2017: Third International Conference on Information and Communication Technology for Competitive Strategies. The conference was held during 16-17 December 2017, Udaipur, India and organized by Association of Computing Machinery, Udaipur Professional Chapter in association with The Institution of Engineers (India), Udaipur Local Center and Global Knowledge Research Foundation. This book contains papers mainly focused on ICT for Computation, Algorithms and Data Analytics and IT Security etc.

[Data Science for Civil Engineering](#) CRC Press

Academic scholars and industry professionals alike face the formidable challenge of staying informed about emerging trends and innovations in cloud computing. The expansive realm of cloud technology has been the catalyst for several transformative changes across industries, offering unparalleled opportunities for optimization and innovation. However, even seasoned experts may find themselves daunted by the intricate web of new technologies, including green cloud computing, edge computing, cryptography in the cloud, load balancing strategies, and cloud analytics insights. Emerging Trends in Cloud Computing: Analytics, Scalability, and Service Models provides academic scholars and industry professionals with a comprehensive exploration of these critical cloud computing topics and more. This invaluable resource provides clarity and insight, serving as a guiding beacon in the ever-evolving world of cloud technology. Whether you're seeking to understand the intricacies of cloud security solutions, the nuances of scalability in cloud computing, or the various service models in the cloud, this book empowers you to navigate this dynamic field with confidence and expertise.

Role of ICT for Multi-Disciplinary Applications in 2030 IGI Global

This book explores how to use generative adversarial networks in a variety of applications and emphasises their substantial advancements over traditional generative models. This book's major goal is to concentrate on cutting-edge research in deep learning and generative adversarial networks, which includes creating new tools and methods for processing text, images, and audio. A Generative Adversarial Network (GAN) is a class of machine learning framework and is the next emerging network in deep learning applications. Generative Adversarial Networks(GANs) have the feasibility to build improved models, as they can generate the sample data as per application requirements. There are various applications of GAN in science and technology, including

computer vision, security, multimedia and advertisements, image generation, image translation, text-to-images synthesis, video synthesis, generating high-resolution images, drug discovery, etc. Features: Presents a comprehensive guide on how to use GAN for images and videos. Includes case studies of Underwater Image Enhancement Using Generative Adversarial Network, Intrusion detection using GAN Highlights the inclusion of gaming effects using deep learning methods Examines the significant technological advancements in GAN and its real-world application. Discusses as GAN challenges and optimal solutions The book addresses scientific aspects for a wider audience such as junior and senior engineering, undergraduate and postgraduate students, researchers, and anyone interested in the trends development and opportunities in GAN and Deep Learning. The material in the book can serve as a reference in libraries, accreditation agencies, government agencies, and especially the academic institution of higher education intending to launch or reform their engineering curriculum

Computer and Cyber Security IGI Global

This is a monumental reference for the theory and practice of computer security. Comprehensive in scope, this text covers applied and practical elements, theory, and the reasons for the design of applications and security techniques. It covers both the management and the engineering issues of computer security. It provides excellent examples of ideas and mechanisms that demonstrate how disparate techniques and principles are combined in widely-used systems. This book is acclaimed for its scope, clear and lucid writing, and its combination of formal and theoretical

aspects with real systems, technologies, techniques, and policies.

Foundations of Mathematical Modelling for Engineering Problem Solving IGI Global

The textbook explores the intersection of artificial intelligence (AI) and machine learning (ML) within water supply distribution systems offer comprehensive insights into cutting-edge applications. Covering fundamental concepts, these texts delve into the intricacies of data collection, preprocessing, and modeling specific to water networks. By utilizing AI and ML algorithms, this book elucidate how to optimize system performance, addressing challenges such as pressure management and leak detection. Decision support systems powered by AI play a pivotal role in forecasting demands and efficiently managing distribution networks. Through engaging case studies, readers gain valuable perspectives on real-world implementations, fostering a deeper understanding of the transformative potential of AI and ML in enhancing water supply infrastructure.

Emerging Technologies and Marketing Strategies for Sustainable Agriculture CRC Press

This book discusses the use of converged technology, a rapidly growing area that enhancements smart devices, communication, Internet of things (IoT), and augmented reality (AR). The book also explores the need for convergence of IoT and AR for various purposes, like personalized services, context awareness, and bridging the gap between the physical and digital world. Furthermore, it examines the implementation of IoT and AR in use cases to define pathways that allow application developers to design modern solutions to satisfy requirements like scalability, abstraction and

security. Featuring an introduction, and covering sensing techniques, and effective architecture in AR-based IoT real-time use cases, the book also addresses the issues and challenges in designing standard architecture and middleware to support diverse applications. Given its scope, it is a valuable resource for teachers and students in engineering, as well as researchers, developers, and users working in multi-disciplinary areas.

Directory of Special Libraries and Information Centers John Wiley & Sons

This book explains use of data science-based techniques for modeling and providing optimal solutions to complex problems in civil engineering. It discusses civil engineering problems like air, water and land pollution, climate crisis, transportation infrastructures, traffic and travel modes, mobility services, and so forth. Divided into two sections, the first one deals with the basics of data science and essential mathematics while the second section covers pertinent applications in structural and environmental engineering, construction management, and transportation.

Features: Details information on essential mathematics required to implement civil engineering applications using data science techniques. Discusses broad background of data science and its fundamentals. Focuses on structural engineering, transportation systems, water resource management, geomatics, and environmental engineering. Includes python programming libraries to solve complex problems. Addresses various real-world applications of data science based civil engineering use cases. This book aims at senior undergraduate students in Civil Engineering and Applied Data Science.

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