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KEY=AND - CHERRY MASON

Multidisciplinary Computational Intelligence Techniques: Applications in Business, Engineering, and Medicine

Applications in Business, Engineering, and Medicine

IGI Global "This book explores the complex world of computational intelligence, which utilizes computational methodologies such as fuzzy logic systems, neural networks, and evolutionary computation for the purpose of managing and using data effectively to address complicated real-world problems"--

Pervasive Cloud Computing Technologies: Future Outlooks and Interdisciplinary Perspectives

Future Outlooks and Interdisciplinary Perspectives

IGI Global Technology trends may come and go, but cloud computing technologies have been gaining consideration in the commercial world due to its ability to provide on-demand access to resources, control the software environment, and supplement existing systems. Pervasive Cloud Computing Technologies: Future Outlooks and Interdisciplinary Perspectives explores the latest innovations with cloud computing and the impact of these new models and technologies. This book will present case studies and research on the future of cloud computing technologies and its ability to increase connectivity of various entities of the world. It is an essential resource for technology practitioners, engineers, managers, and academics aiming to gain the knowledge of these novel and pervasive technologies.

Encyclopedia of Business Analytics and Optimization

IGI Global As the age of Big Data emerges, it becomes necessary to take the five dimensions of Big Data- volume, variety, velocity, volatility, and veracity- and focus these dimensions towards one critical emphasis - value. The *Encyclopedia of Business Analytics and Optimization* confronts the challenges of information retrieval in the age of Big Data by exploring recent advances in the areas of knowledge management, data visualization, interdisciplinary communication, and others. Through its critical approach and practical application, this book will be a must-have reference for any professional, leader, analyst, or manager interested in making the most of the knowledge resources at their disposal.

Incorporating Nature-Inspired Paradigms in Computational Applications

IGI Global Many techniques have been developed to control the variety of dynamic systems. To develop those control techniques, it is fundamental to know the mathematical relations between the system inputs and outputs. *Incorporating Nature-Inspired Paradigms in Computational Applications* is a critical scholarly resource that examines the application of nature-inspired paradigms on system identification. Featuring coverage on a broad range of topics such as biogeographic computation, evolutionary control systems, and natural computing, this book is geared towards IT professionals, engineers, computer scientists, academicians, researchers, and graduate-level students seeking current research on the application of nature-inspired paradigms.

Security, Trust, and Regulatory Aspects of Cloud Computing in Business Environments

IGI Global Emerging as an effective alternative to organization-based information systems, cloud computing has been adopted by many businesses around the world. Despite the increased popularity, there remain concerns about the security of data in the cloud since users have become accustomed to having control over their hardware and software. *Security, Trust, and Regulatory Aspects of Cloud Computing in Business Environments* compiles the research and views of cloud computing from various individuals around the world. Detailing cloud security, regulatory and industry compliance, and trust building in the cloud, this book is an essential reference source for practitioners, professionals, and researchers worldwide, as well as business managers interested in an assembled collection of solutions provided by a variety of cloud users.

Handbook of Research on Demand-Driven Web Services: Theory, Technologies, and Applications

Theory, Technologies, and Applications

IGI Global In the current technological world, Web services play an integral role in service computing and social networking services. This is also the case in the traditional FREG (foods, resources, energy, and goods) services because almost all traditional services are replaced fully or partially by Web services. *Handbook of Research on Demand-Driven Web Services: Theory, Technologies, and Applications* presents comprehensive and in-depth studies that reveal the cutting-edge theories, technologies, methodologies, and applications of demand-driven Web, mobile, and e-business services. This book provides critical perspectives for researchers and practitioners, lecturers and undergraduate/graduate students, and professionals in the fields of computing, business, service, management, and government, as well as a variety of readers from all the social strata.

Health Care Delivery and Clinical Science: Concepts, Methodologies, Tools, and

Applications

Concepts, Methodologies, Tools, and Applications

IGI Global The development of better processes to provide proper healthcare has enhanced contemporary society. By implementing effective collaborative strategies, this ensures proper quality and instruction for both the patient and medical practitioners. *Health Care Delivery and Clinical Science: Concepts, Methodologies, Tools, and Applications* is a comprehensive reference source for the latest scholarly material on emerging strategies and methods for delivering optimal healthcare and examines the latest techniques and methods of clinical science. Highlighting a range of pertinent topics such as medication management, health literacy, and patient engagement, this multi-volume book is ideally designed for professionals, practitioners, researchers, academics, and graduate students interested in healthcare delivery and clinical science.

Optimizing Contemporary Application and Processes in Open Source Software

IGI Global As is true of most technological fields, the software industry is constantly advancing and becoming more accessible to a wider range of people. The advancement and accessibility of these systems creates a need for understanding and research into their development. *Optimizing Contemporary Application and Processes in Open Source Software* is a critical scholarly resource that examines the prevalence of open source software systems as well as the advancement and development of these systems. Featuring coverage on a wide range of topics such as machine learning, empirical software engineering and management, and open source, this book is geared toward academicians, practitioners, and researchers seeking current and relevant research on the advancement and prevalence of open source software systems.

Enterprise Management Strategies in the Era of Cloud Computing

IGI Global Recent advances in internet architecture have led to the advent and subsequent explosion of cloud computing technologies, providing businesses with a powerful toolbox of collaborative digital resources. These technologies have fostered a more flexible, decentralized approach to IT infrastructure, enabling businesses to operate in a more agile fashion and on a globalized scale. *Enterprise Management Strategies in the Era of Cloud Computing* seeks to explore the possibilities of business in the cloud. Targeting an audience of research scholars, students, software developers, and business professionals, this premier reference source provides a cutting-edge look at the exciting and multifaceted relationships between cloud computing, software virtualization, collaborative technology, and business infrastructure in the 21st Century.

Pattern Recognition and Classification in Time Series Data

IGI Global Patterns can be any number of items that occur repeatedly, whether in the behaviour of animals, humans, traffic, or even in the appearance of a design. As technologies continue to advance, recognizing, mimicking, and responding to all types of patterns becomes more precise. *Pattern Recognition and Classification in Time Series Data* focuses on intelligent methods and techniques for recognizing and storing dynamic patterns. Emphasizing topics related to artificial intelligence, pattern management, and algorithm development, in addition to practical examples and applications, this publication is an essential reference source for graduate students, researchers, and professionals in a variety of computer-related disciplines.

Applied Big Data Analytics in Operations Management

IGI Global Operations management is a tool by which companies can effectively meet customers' needs using the least amount of resources necessary. With the emergence of sensors and smart metering, big data is becoming an intrinsic part of modern operations management. *Applied Big Data Analytics in Operations Management* enumerates the challenges and creative solutions and tools to apply when using big data in operations management. Outlining revolutionary concepts and applications that help businesses predict customer behavior along with applications of artificial neural networks, predictive analytics, and opinion mining on business management, this comprehensive publication is ideal for IT professionals, software engineers, business professionals, managers, and students of management.

Multidisciplinary Perspectives on Telecommunications, Wireless Systems, and Mobile Computing

IGI Global The development of new information and communication technologies has a considerable impact on the way humans interact with each other and their environment. The proper use of these technologies is an important consideration in the success of modern human endeavors. *Multidisciplinary Perspectives on Telecommunications, Wireless Systems, and Mobile Computing* explores some of the latest advances in wireless communication technologies, making use of empirical research and analytical case studies to evaluate best practices in the discipline. This book will provide insight into the next generation of information and communication technologies for developers, engineers, students, researchers, and managers in the telecommunications field.

Data Mining: Concepts, Methodologies, Tools, and Applications

Concepts, Methodologies, Tools, and Applications

IGI Global Data mining continues to be an emerging interdisciplinary field that offers the ability to extract information from an existing data set and translate that knowledge for end-users into an understandable way. *Data Mining: Concepts, Methodologies, Tools, and Applications* is a comprehensive collection of research on the latest advancements and developments of data mining and how it fits into the current technological world.

Emerging Theory and Practice in Neuroprosthetics

IGI Global Neuroprosthetics is a fast-growing area that brings together the fields of biomedical engineering and neuroscience as a means to interface the neural system directly to prostheses. Advancing research and applications in this field can assist in successfully restoring motor, sensory, and cognitive functions. *Emerging Theory and Practice in Neuroprosthetics* brings together the most up-to-date research surrounding neuroprosthetics advances and applications. Presenting several new results, concepts, and further developments in the area of neuroprosthetics, this book is an essential publication for researchers, upper-level students, engineers, and medical practitioners.

Innovative Collaborative Practice and Reflection in Patient Education

IGI Global The process of patient education allows for patients to think about their health in new ways and for educators and professionals to propose new ways to heal, with the ultimate goal of patients having a positive outlook on life and consistently maintained health. *Innovative Collaborative Practice and Reflection in Patient Education* presents multigenre writing, incorporating authors' personal and professional stories along with academic theories. It combines the fields of education and medicine, presenting innovative approaches to health education and designing new approaches to healing. This research publication will impact the field of health education and be of use to educators, researchers, practitioners, professionals, and patients.

Flipping Health Care through Retail Clinics and Convenient Care Models

IGI Global Over time, a country's healthcare system typically undergoes a number of developments as new demands emerge from the public and new legislation is passed from the government. These systems are composed of a number of interconnected parts, each one vital to the overall success of the system. *Flipping Health Care through Retail Clinics and Convenient Care Models* addresses the present state of the health system by focusing on current trends and future developments that could assist in delivering accessible and cost-effective medical care to the general public. Bringing together components of the present and future, this publication serves as an essential tool for students and researchers who want to develop a thorough understanding of the changing scope of the health industry in the public sphere.

Cross-Cultural Training and Teamwork in Healthcare

IGI Global "This book explores the complex relationships between patients, physicians, and nurses with different cultural backgrounds, integrating theoretical and empirical perspectives on medical teamwork"--

Medical Diagnosis Using Artificial Neural Networks

IGI Global Advanced conceptual modeling techniques serve as a powerful tool for those in the medical field by increasing the accuracy and efficiency of the diagnostic process. The application of artificial intelligence assists medical professionals to analyze and comprehend a broad range of medical data, thus eliminating the potential for human error. *Medical Diagnosis Using Artificial Neural Networks* introduces effective parameters for improving the performance and application of machine learning and pattern recognition techniques to facilitate medical processes. This book is an essential reference work for academicians, professionals, researchers, and students interested in the relationship between artificial intelligence and medical science through the use of informatics to improve the quality of medical care.

Vehicular Cloud Computing for Traffic Management and Systems

IGI Global Road accidents caused by impaired and distracted driving as well as traffic congestion are on the rise, with the numbers increasing dramatically every day. Intelligent transportation systems (ITS) aim to improve the efficiency and safety of traveling by consolidating vehicle operations, managing vehicle traffic, and notifying drivers with alerts and safety messages in real time. *Vehicular Cloud Computing for Traffic Management and Systems* provides innovative research on the rapidly advancing applications of vehicle-to-vehicle and vehicle-to-infrastructure communication. It also covers the need to fully utilize vehicular ad-hoc network (VANET) resources to provide updated and dynamic information about the conditions of road traffic so that the number of road accidents can be minimized. Featuring research on topics such as identity management, computational architecture, and resource management, this book is ideally designed for urban planners, researchers, policy makers, graduate-level students, transportation engineers, and technology developers seeking current research on vehicle computational design, architecture, security, and privacy.

Optimizing Medicine Residency Training Programs

IGI Global The medical profession requires extensive training and preparation in order to ensure the success and competency of future doctors and healthcare professionals. With an emphasis on professional development and medical education, current professionals in this field acknowledge the importance of residency programs and training in the professional development of future doctors. *Optimizing Medicine Residency Training Programs* presents a comprehensive overview of chapters ranging from the history of medicine to opportunities and research for further exploration geared toward the professional development and medical training for the next generation of doctors and healthcare professionals. This publication is an essential reference source for academicians, practitioners, and professionals interested in the education and training of modern medical professionals.

Big Data Analytics in HIV/AIDS Research

IGI Global With the advent of new technologies in big data science, the study of medical problems has made significant progress. Connecting medical studies and computational methods is crucial for the advancement of the medical industry. *Big Data Analytics in HIV/AIDS Research* provides emerging research on the development and implementation of computational techniques in big data analysis for biological and medical practices. While highlighting topics such as deep learning, management software, and molecular modeling, this publication explores the various applications of data analysis in clinical decision making. This book is a vital resource for medical practitioners, nurses, scientists, researchers, and students seeking current research on the connections between data analytics in the field of medicine.

Advanced Research on Biologically Inspired Cognitive Architectures

IGI Global There are many different approaches to understanding human consciousness. By conducting research to better understand various biological mechanisms, these can be redefined and utilized for technological purposes. *Advanced Research on Biologically Inspired Cognitive Architectures* is an essential reference source for the latest scholarly research on the biological elements of human cognition and examines the applications of consciousness within computing environments. Featuring exhaustive coverage on a broad range of innovative topics and perspectives, such as artificial intelligence, bio-robotics, and human-computer interaction, this publication is ideally designed for academics, researchers, professionals, graduate students, and practitioners seeking current research on the exploration of the intricacies of consciousness and different approaches of perception.

Cognitive Radio Oriented Wireless Networks and Wireless Internet

16th EAI International Conference, CROWNCOM 2021, Virtual Event, December 11, 2021, and 14th EAI International Conference, WiCON 2021, Virtual Event, November 9, 2021, Proceedings

Springer Nature

Encyclopedia of Information Science and Technology, Third Edition

IGI Global "This 10-volume compilation of authoritative, research-based articles contributed by thousands of researchers and experts from all over the world emphasized modern issues and the presentation of potential opportunities, prospective solutions, and future directions in the field of information science and technology"--Provided by publisher.

Evolutionary Computation with Intelligent Systems

A Multidisciplinary Approach to Society 5.0

CRC Press This book focuses on cutting-edge innovations and core theories, principles, and algorithms applicable to a wide area. Real-life applications, case studies, and examples are included along with emerging trends, design, and optimized solutions pivoting around the needs of Society 5.0. *Evolutionary Computation with Intelligent Systems: A Multidisciplinary Approach to Society 5.0* provides a holistic view of evolutionary computation techniques including principles, procedures, and future applications with real-life examples. The book comprehensively explains evolutionary computation, design, principles, development trends, and optimization and describes how it can transform the operating context of the organization. It exemplifies the potential of evolutionary computation for the next generation and the role of cloud computing in shaping Society 5.0. It also provides insight into various platforms, paradigms, techniques, and tools used in diverse fields. This book appeals to a variety of readers such as academicians, researchers, research scholars, and postgraduates.

Computational Intelligence in Business Analytics

Concepts, Methods, and Tools for Big Data Applications

Pearson Education Using computational intelligence methods, you can drive far more value from business analytics, and account far more effectively for the real-world uncertainties and complexities you face in making key decisions. Whether you're a professional or a student, this up-to-date, accessible reference will teach you the computational intelligence concepts and methods you need to fully leverage these powerful techniques. Drawing on his pioneering experience as an instructor and researcher, Dr. Les Sztandera thoroughly illuminates today's key computational intelligence tools, knowledge, and strategies for analysis, exploration, and knowledge generation. Sztandera demystifies artificial neural networks, genetic algorithms, and fuzzy systems, and guides you through using them to model, discover, and interpret new patterns that can't be found through statistical methods alone. To demonstrate these techniques at work, *Computational Intelligence in Business Analytics* is packed with relevant case studies and examples, including: Customer segmentation for direct marketing Customer profiling for relationship management Efficient mailing campaigns Customer retention Identification of cross-selling opportunities Credit score analysis Detection of fraudulent behavior and transactions Hedge fund strategies Sztandera shows how computational intelligence can inform the design and integration of services, architecture, brand identity, and product portfolio across the entire enterprise. He also shows how to complement computational intelligence with visualization, explorative interfaces and advanced reporting, thereby empowering business users and enterprise stakeholders to take full advantage of it.

Impact of Smart Technologies and Artificial Intelligence (AI) Paving Path Towards Interdisciplinary Research in the Fields of Engineering, Arts, Humanities, Commerce, Economics, Social Sciences, Law and Management - Challenges and Opportunities

Shanlax Publications This e-ISBN collection of 34 chapters draws on the diverse insights of the opportunities and emerging challenges, changes in the smart technologies and artificial intelligence{AI} paving path towards interdisciplinary research in the fields of Engineering, Arts, Humanities, Commerce, Economics, Social Sciences, Law and Management. It offers decision-makers a comprehensive picture of the impact of Smart technologies and Artificial Intelligence (AI) expected in the long-term changes, and inspiration to leverage the opportunities that offer to improve the state of education. Academicians must find and establish a new equilibrium and a new normal for learning amid the present challenges.

Multidisciplinary Computational Anatomy

Toward Integration of Artificial Intelligence with MCA-based Medicine

Springer Nature This volume thoroughly describes the fundamentals of a new multidisciplinary field of study that aims to deepen our understanding of the human body by combining medical image processing, mathematical analysis, and artificial intelligence. *Multidisciplinary Computational Anatomy (MCA)* offers an advanced diagnosis and therapeutic navigation system to help detect or predict human health problems from the micro-level to macro-level using a four-dimensional, dynamic approach to human anatomy: space, time, function, and pathology. Applying this dynamic and "living" approach in the clinical setting will promote better planning for - and more accurate, effective, and safe implementation of - medical management. *Multidisciplinary Computational Anatomy* will appeal not only to clinicians but also to a wide readership in various scientific fields such as basic science, engineering, image processing, and biomedical engineering. All chapters were written by respected specialists and feature abundant color illustrations. Moreover, the findings presented here share new insights into unresolved issues in the diagnosis and treatment of disease, and into the healthy human body.

Advances in Machine Learning and Computational Intelligence

Proceedings of ICMLCI 2019

[Springer Nature](#) This book gathers selected high-quality papers presented at the International Conference on Machine Learning and Computational Intelligence (ICMLCI-2019), jointly organized by Kunming University of Science and Technology and the Interscience Research Network, Bhubaneswar, India, from April 6 to 7, 2019. Addressing virtually all aspects of intelligent systems, soft computing and machine learning, the topics covered include: prediction; data mining; information retrieval; game playing; robotics; learning methods; pattern visualization; automated knowledge acquisition; fuzzy, stochastic and probabilistic computing; neural computing; big data; social networks and applications of soft computing in various areas.

Computational Intelligence Techniques and Their Applications to Software Engineering Problems

[CRC Press](#) Computational Intelligence Techniques and Their Applications to Software Engineering Problems focuses on computational intelligence approaches as applicable in varied areas of software engineering such as software requirement prioritization, cost estimation, reliability assessment, defect prediction, maintainability and quality prediction, size estimation, vulnerability prediction, test case selection and prioritization, and much more. The concepts of expert systems, case-based reasoning, fuzzy logic, genetic algorithms, swarm computing, and rough sets are introduced with their applications in software engineering. The field of knowledge discovery is explored using neural networks and data mining techniques by determining the underlying and hidden patterns in software data sets. Aimed at graduate students and researchers in computer science engineering, software engineering, information technology, this book: Covers various aspects of in-depth solutions of software engineering problems using computational intelligence techniques Discusses the latest evolutionary approaches to preliminary theory of different solve optimization problems under software engineering domain Covers heuristic as well as meta-heuristic algorithms designed to provide better and optimized solutions Illustrates applications including software requirement prioritization, software cost estimation, reliability assessment, software defect prediction, and more Highlights swarm intelligence-based optimization solutions for software testing and reliability problems

Nature-Inspired Intelligent Techniques for Solving Biomedical Engineering Problems

[IGI Global](#) Technological tools and computational techniques have enhanced the healthcare industry. These advancements have led to significant progress and novel opportunities for biomedical engineering. Nature-Inspired Intelligent Techniques for Solving Biomedical Engineering Problems is a pivotal reference source for emerging scholarly research on trends and techniques in the utilization of nature-inspired approaches in biomedical engineering. Featuring extensive coverage on relevant areas such as artificial intelligence, clinical decision support systems, and swarm intelligence, this publication is an ideal resource for medical practitioners, professionals, students, engineers, and researchers interested in the latest developments in biomedical technologies.

Artificial Intelligence for Smart and Sustainable Energy Systems and Applications

[MDPI](#) Energy has been a crucial element for human beings and sustainable development. The issues of global warming and non-green energy have yet to be resolved. This book is a collection of twelve articles that provide strong evidence for the success of artificial intelligence deployment in energy research, particularly research devoted to non-intrusive load monitoring, network, and grid, as well as other emerging topics. The presented artificial intelligence algorithms may provide insight into how to apply similar approaches, subject to fine-tuning and customization, to other unexplored energy research. The ultimate goal is to fully apply artificial intelligence to the energy sector. This book may serve as a guide for professionals, researchers, and data scientists—namely, how to share opinions and exchange ideas so as to facilitate a better fusion of energy, academic, and industry research, and improve in the quality of people's daily life activities.

Artificial Intelligence in Education

15th International Conference, AIED 2011, Auckland, New Zealand, June 28 - July 2, 2011, Proceedings

Springer Science & Business Media This book constitutes the refereed proceedings of the 15th International Conference on Artificial Intelligence in Education, AIED 2011, held in Auckland, New Zealand in June/July 2011. The 49 revised full papers presented together with three invited talks and extended abstracts of poster presentations, young researchers contributions and interactive systems reports and workshop reports were carefully reviewed and selected from a total of 193 submissions. The papers report on technical advances in and cross-fertilization of approaches and ideas from the many topical areas that make up this highly interdisciplinary field of research and development including artificial intelligence, agent technology, computer science, cognitive and learning sciences, education, educational technology, game design, psychology, philosophy, sociology, anthropology and linguistics.

MEDICAL IMAGE PROCESSING

PHI Learning Pvt. Ltd. Medical Image Processing: Concepts and Applications presents an overview of image processing for various applications in the field of medical science. Inclusion of several topics like noise reduction filters, feature extraction, image restoration, segmentation, soft computing techniques and context-based medical image retrieval, etc. makes this book a single-source information meeting the requirements of the readers. Besides, the coverage of digital image processing, human visual perception and CAD system to be used in automated diagnosis system, medical imaging modalities, various application areas of medical field, detection and classification of various disease, etc. is highly emphasised in the book. The book, divided into eight chapters, presents the topics in a clear, simple, practical and cogent fashion that provides the students with the insight into theory as well as applications to the practical problems. The research orientation of the book greatly supports the concepts of image processing to be applied for segmentation, classification and detection of affected areas in X-ray, MRI and mammographic and all other medical images. Throughout the book, an attempt has been made to address the challenges faced by radiologists, physicians and doctors in scanning, interpretation and diagnosis process. The book uses an abundance of colour images to impart a high level of comprehension of concepts and helps in mastering the process of medical image processing. Special attention is made on the review of algorithms or methods of medical image formation, processing and analysis, medical imaging applications, and emerging medical imaging modality. This is purely a text dedicated for the undergraduate and postgraduate students of biomedical engineering. The book is also of immense use to the students of computer science engineering and IT who offer a course on digital image processing. Key Points • Chapter-end review questions test the students' knowledge of the fundamental concepts. • Course outcomes help the students in capturing the key points. • Several images and information regarding morphological operations given in appendices help in getting additional knowledge in the field of medical image processing.

Computational Intelligence in Time Series Forecasting

Theory and Engineering Applications

Springer Science & Business Media Foresight in an engineering business can make the difference between success and failure, and can be vital to the effective control of industrial systems. The authors of this book harness the power of intelligent technologies individually and in combination.

Artificial Intelligence and Cognitive Computing

Methods, Technologies, Systems, Applications and Policy Making

Artificial intelligence (AI) is a subject garnering increasing attention in both academia and the industry today. The understanding is that AI-enhanced methods and techniques create a variety of opportunities related to improving basic and advanced business functions, including production processes, logistics, financial management and others. As this collection demonstrates, AI-enhanced tools and methods tend to offer more precise results in the fields of engineering, financial accounting, tourism, air-pollution management and many more. The objective of this collection is to bring these topics

together to offer the reader a useful primer on how AI-enhanced tools and applications can be of use in today's world. In the context of the frequently fearful, skeptical and emotion-laden debates on AI and its value added, this volume promotes a positive perspective on AI and its impact on society. AI is a part of a broader ecosystem of sophisticated tools, techniques and technologies, and therefore, it is not immune to developments in that ecosystem. It is thus imperative that inter- and multidisciplinary research on AI and its ecosystem is encouraged. This collection contributes to that.

Unmanned Aerial Vehicles and Multidisciplinary Applications Using AI Techniques

Engineering Science Reference Explores artificial techniques, pattern recognition, machine and deep learning-based methods and techniques applied to different real time applications of Unmanned Aerial Vehicles (UAV). The aim is to synthesize the scope of machine learning and deep learning models in enhancing UAV capabilities, solutions to problems and application areas.

Bridge Optimization

Inspection and Condition Monitoring

BoD – Books on Demand This is a collection of several applications for condition monitoring and damage identification in bridge structures. Bridge structural condition monitoring is essential since it can provide early warning of potential defects in bridges, which may induce catastrophic accidents and result in huge economic loss. Such bridge condition monitoring relies on sensing techniques, especially advanced sensing techniques that can provide detailed information on bridge structures. Additionally, postprocessing systems can interpret the captured data and warn of any potential faults. This book will give students a thorough understanding of bridge condition monitoring.

Artificial Intelligence and Decision-Making Applications in a Business Context. Chances and Risks

GRIN Verlag Bachelor Thesis from the year 2020 in the subject Business economics - Business Management, Corporate Governance, grade: 1,1, University Pontificia Comillas Madrid, language: English, abstract: This thesis is concerned with what AI is capable of in decision-making when involved in organizational decision-making processes or embedded in offered products that perform decisions. It is also concerned with what is lost and what is gained through its use and which risks businesses face when applying it. It adds value to previous work conducted on challenges and risks by explaining these from a business perspective focusing on the economic implications for organizations. The resulting overview on chances and risks can serve organizations interested in AI investments to augment or automate decision-making in understanding the risk situation and potentials in this field. In the first chapter AI is introduced in a comprehensible way for non-computer scientists and its relevance for business is outlined. Subsequently, decision processes and how humans and AI tackle them are explained which provides a foundation to understand respective strengths and limitations of humans and AI in decision-making. The third chapter explains how AI can be applied in decision-making in businesses processes and products that perform decisions providing benchmark examples. Autonomous driving and recruiting are presented as examples for decision automation and decision augmentation respectively on the basis of which benefits and challenges will be explained. Focusing on these examples aims at making the possible associated effects of using AI in decision-making processes more tangible and understandable for business professionals.

The Fusion of Internet of Things, Artificial Intelligence, and Cloud Computing in Health Care

Springer Nature This book reviews the convergence technologies like cloud computing, artificial intelligence (AI) and Internet of Things (IoT) in healthcare and how they can help all stakeholders in the healthcare sector. The book is a proficient guide on the relationship between AI, IoT and healthcare and gives examples into how IoT is changing all aspects of the healthcare industry. Topics include remote patient monitoring, the telemedicine ecosystem, pattern imaging analytics using AI, disease identification and diagnosis using AI, robotic surgery, prediction of epidemic outbreaks, and more. The contributors include applications and case studies across all areas of computational intelligence in healthcare data. The authors also include workflow in IoT-enabled healthcare technologies and explore

privacy and security issues in healthcare-based IoT.