Big Data And Cloud Computing Issues And Problems

"This reference text covers intelligent computing through Internet of Things (IoT) and Big Data in Vehicular Environment in a single volume. The text covers important topics including topology-based routing protocols, heterogeneous wireless networks, security risks, software-defined vehicular Ad-hoc network, vehicular delay tolerant networks, and energy harvesting for WSNs using rectenna"--

Big data is currently one of the most critical emerging technologies. Organizations around the world are looking to exploit the explosive growth of data to unlock previously hidden insights in the hope of creating new revenue streams, gaining operational efficiencies, and obtaining greater understanding of customer needs. It is important to think of big data and analytics together. Big data is the term used to describe the recent explosion of different types of data from disparate sources. Analytics is about examining data to derive interesting and relevant trends and patterns, which can be used to inform decisions, optimize processes, and even drive new business models. With today's deluge of data comes the problems of processing that data, obtaining the correct skills to manage and analyze that data, and establishing rules to govern the data's use and distribution. The big data technology stack is ever growing and sometimes confusing, even more so when we add the complexities of setting up big data environments with large up-front investments. Cloud computing seems to be a perfect vehicle for hosting big data workloads. However, working on big data in the cloud brings its own challenge of reconciling two contradictory design principles. Cloud computing is based on the concepts of consolidation and resource pooling, but big data systems (such as Hadoop) are built on the shared nothing principle, where each node is independent and self-sufficient. A solution architecture that can allow these mutually exclusive principles to coexist is required to truly exploit the elasticity and ease-of-use of cloud computing for big data environments. This IBM® RedpaperTM publication is aimed at chief architects, line-of-business executives, and CIOs to provide an understanding of the cloud-related challenges they face and give prescriptive guidance for how to realize the benefits of big data solutions quickly and cost-effectively.

This book introduces the latest research findings in cloud, edge, fog, and mist computing and their applications in various fields using geospatial data. It solves a number of problems of cloud computing and big data, such as scheduling, security issues using different techniques, which researchers from industry and academia have been attempting to solve in virtual environments. Some of these problems are of an intractable nature and so efficient technologies like fog, edge and mist computing play an important role in addressing these issues. By exploring emerging advances in cloud computing and big data analytics and their engineering applications, the book enables researchers to understand the mechanisms needed to implement cloud, edge, fog, and mist computing in their own endeavours, and motivates them to examine their own research findings and developments.

A comprehensive guide to learning technologies that unlock the value in big data Cognitive Computing provides detailed guidance toward building a new class of systems that learn from experience and derive insights to unlock the value of big data. This book helps technologists understand cognitive computing's underlying technologies, from knowledge representation techniques and natural language processing algorithms to dynamic learning approaches based on accumulated evidence, rather than reprogramming. Detailed case examples from the financial, healthcare, and manufacturing walk readers step-by-step through the design and testing of cognitive systems, and expert perspectives from organizations such as Cleveland Clinic, Memorial Sloan-Kettering, as well as commercial vendors that are creating solutions. These organizations provide insight into the real-world implementation of cognitive computing systems. The IBM Watson cognitive computing platform is described in a detailed chapter because of its significance in helping to define this emerging market. In addition, the book includes implementations of emerging projects from Qualcomm, Hitachi, Google and Amazon. Today's cognitive computing solutions build on established concepts from artificial intelligence, natural language processing, ontologies, and leverage advances in big data management and analytics. They foreshadow an intelligent infrastructure that enables a new generation of customer and context-aware smart applications in all industries. Cognitive Computing is a comprehensive guide to the subject, providing both the theoretical and practical guidance technologists need. Discover how cognitive computing evolved from promise to reality Learn the elements that make up a cognitive computing system Understand the groundbreaking hardware and software technologies behind cognitive computing Learn to evaluate your own application portfolio to find the best candidates for pilot projects Leverage cognitive computing capabilities to transform the organization Cognitive systems are rightly being hailed as the new era of computing. Learn how these technologies enable emerging firms to compete with entrenched giants, and forward-thinking established firms to disrupt their industries. Professionals who currently work with big data and analytics will see how cognitive computing builds on their foundation, and creates new opportunities. Cognitive Computing provides complete guidance to this new level of human-machine interaction.

Systems Simulation and Modelling for Cloud Computing and Big Data Applications provides readers with the most current approaches to solving problems through the use of models and simulations, presenting SSM based approaches to pe and benchmarking that offer significant advantages. For example, multiple big data and cloud application developers and researchers can perform tests in a controllable and repeatable manner. Inspired by the need to analyze the performance data processing and cloud frameworks, researchers have introduced several benchmarks, including BigDataBench, BigBench, HiBench, PigMix, CloudSuite and GridMix, which are all covered in this book. Despite the substantial progress, the r community still needs a holistic, comprehensive big data SSM to use in almost every scientific and engineering discipline involving multidisciplinary research. SSM develops frameworks that are applicable across disciplines to develop benchm are useful in solutions development. Examines the methodology and requirements of benchmarking big data and cloud computing tools, advances in big data frameworks and benchmarks for large-scale data analytics, and frameworks for be predictive analytics in big data deployment Discusses applications using big data benchmarks, such as BigDataBench, BigBench, HiBench, MapReduce, HPCC, ECL, HOBBIT, GridMix and PigMix, and applications using big data frameworks, such Hadoop, Spark, Samza, Flink and SQL frameworks Covers development of big data benchmarks to evaluate workloads in state-of-the-practice heterogeneous hardware platforms, advances in modeling and simulation tools for performance ev security problems and scalable cloud computing environments

This book provides a framework for evaluating big data and cloud computing based on how they evolve to fit users' needs in developing countries in key areas, such as agriculture and education. The authors discuss how this framework ca businesses, governments, and consumers to accelerate economic growth and overcome information and communication barriers. By examining the ways in which cloud computing can drive social, economic, and environmental transformation nuanced understanding of the opportunities and challenges these technologies offer. The authors also provide an authoritative and up-to-date account of big data's diffusion into a wide range of developing economies, such as Brazil and Ch key concepts through in-depth case studies. Special attention is paid to economic development in the context of the new Sustainable Development Goals formulated by the United Nations, introducing readers to the most modern standard evaluation. Students of information management, entrepreneurship, and development, as well as policy makers, researchers, and practitioners, will find Big Data and Cloud Computing for Development an interesting read and a useful referen

This edited book presents scientific results of the International Semi-Virtual Workshop on Software Engineering in IoT, Big data, Cloud and Mobile Computing (SE-ICBM 2020) which was held on October 15, 2020, at Soongsil University, Se aim of this workshop was to bring together researchers and scientists, businessmen and entrepreneurs, teachers, engineers, computer users, and students to discuss the numerous fields of computer science and to share their experience new ideas and information in a meaningful way. Research results about all aspects (theory, applications and tools) of computer and information science, and to discuss the practical challenges encountered along the way and the solutions them. The workshop organizers selected the best papers from those papers accepted for presentation at the workshop. The papers were chosen based on review scores submitted by members of the program committee and underwent fu rounds of review. From this second round of review, 17 of the conference's most promising papers are then published in this Springer (SCI) book and not the conference proceedings. We impatiently await the important contributions that authors will bring to the field of computer and information science.

This book explores the security and privacy issues of Cloud Computing and Big Data, providing essential insights into cloud computing and big data integration.

The book 'Data Intensive Computing Applications for Big Data' discusses the technical concepts of big data, data intensive computing through machine learning, soft computing and parallel computing paradigms. It brings together researchers to report their latest results or progress in the development of the above mentioned areas. Since there are few books on this specific subject, the editors aim to provide a common platform for researchers working in this area to exhibit their latest findings. The book is intended as a reference work for advanced undergraduates and graduate students, as well as multidisciplinary, interdisciplinary and transdisciplinary research workers and scientists on the subjects of big data and cloud/parallel and distributed computing, and explains didactically many of the core concepts of these approaches for practical applications. It is organized into 24 chapters providing a comprehensive overview of big data analysis using parallel computing and addresses the complete data science workflow in the cloud, as well as dealing with privacy issues and the challenges faced in a data-intensive cloud computing environment. The book explores both fundamental and high-level concepts, and will serve as a manual for those in the industry, while also helping beginners to understand the basic and advanced aspects of big data and cloud computing.

This book examines various topics and approaches related to the security and privacy in big data and cloud computing, where authors share their expertise in their respective chapters on a broad range of security and privacy challenges in a data-intensive cloud computing environment.

This book presents the outcomes of the 3rd IEEE/ACIS International Conference on Big Data, Cloud Computing, Data Science & Engineering (BCD 2018), which was held on July 10–12, 2018 in Kanazawa. The aim of the conference was to bring together researchers and scientists, businesspeople and entrepreneurs, teachers, engineers, computer users, and students to discuss the various fields of computer science, to share their experiences, and to exchange new ideas and information in a meaningful way. All aspects (theory, applications and tools) of computer and information science, the practical challenges encountered along the way, and the solutions adopted to solve them are all explored here. The conference organizers selected the best papers from among those accepted for presentation. The papers were chosen on the basis of review scores submitted by members of the program committee and subsequently underwent further rigorous review. Following this second round of review, 13 of the conference's most promising papers were selected for this Springer (SCI) book. We eagerly await the important contributions that we know these authors will make to the field of computer and information science.

Big data consists of data sets that are too large and complex for traditional data processing and data management applications. Therefore, to obtain the valuable information within the data, one must use a variety of innovative analytical methods, such as web analytics, machine learning, and network analytics. As the study of big data becomes more popular, there is an urgent demand for studies on high-level computational intelligence and computing services for analyzing this significant area of information science. Big Data Analytics for Sustainable Computing is a collection of innovative research that focuses on new computing and system development issues in emerging sustainable applications. Featuring coverage on a wide range of topics such as data filtering, knowledge engineering, and cognitive analytics, this publication is ideally designed for data scientists, IT specialists, computer science practitioners, computer engineers, academicians, professionals, and students seeking current research on emerging analytical techniques and data processing software.

This book addresses topics related to cloud and Big Data technologies, architecture and applications including distributed computing and data centers, cloud infrastructure and security, and end-user services. The majority of the book is devoted to the security aspects of cloud computing and Big Data. Cloud computing, which can be seen as any subscription-based or pay-per-use service that extends the Internet's existing capabilities, has gained considerable attention from both academia and the IT industry as a new infrastructure requiring smaller investments in hardware platforms, staff training, or licensing software tools. It is a new paradigm that has ushered in a revolution in both data storage and computation. In parallel to this progress, Big Data technologies, which rely heavily on cloud computing platforms for both data storage and processing, have been developed and deployed at breathtaking speed. They are among the most frequently used technologies for developing applications and services in many fields, such as the web, health, and energy. Accordingly, cloud computing and Big Data technologies are two of the most central current and future research mainstreams. They involve and impact a host of fields, including business, scientific research, and public and private administration. Gathering extended versions of the best papers presented at the Third International Conference on Cloud Computing Technologies and Applications (CloudTech'17), this book offers a valuable resource for all Information System managers, researchers, students, developers, and policymakers involved in the technological and application aspects of cloud computing and Big Data.

Cloud computing offers many advantages to researchers and engineers who need access to high performance computing facilities for solving particular compute-intensive and/or large-scale problems, but whose overall high performance computing (HPC) needs do not justify the acquisition and operation of dedicated HPC facilities. There are, however, a number of fundamental problems which must be addressed, such as the limitations imposed by accessibility, security and communication speed, before these advantages can be exploited to the full. This book presents 14 contributions selected from the International Research Workshop on Advanced High Performance Computing Systems, held in Cetraro, Italy, in June 2012. The papers are arranged in three chapters. Chapter 1 includes five papers on cloud infrastructures, while Chapter 2 discusses cloud applications. The third chapter in the book deals with big data, which is nothing new – large scientific organizations have been collecting large amounts of data for decades – but what is new is that the focus has now broadened to include sectors such as business analytics, financial analyses, Internet service providers, oil and gas, medicine, automotive and a host of others. This book will be of interest to all those whose work involves them with aspects of cloud computing and big data applications.

This book unravels the mystery of Big Data computing and its power to transform business operations. The approach it uses will be helpful to any professional who must present a case for realizing Big Data computing solutions or to those who could be involved in a Big Data computing project. It provides a framework that enables business and technical managers to make optimal decisions necessary for the successful migration to Big Data computing environments and applications within their organizations.

This book is a compendium of the proceedings of the International Conference on Big Data and Cloud Computing. It includes recent advances in the areas of big data analytics, cloud computing, internet of nano things, cloud security, data analytics in the cloud, smart cities and grids, etc. This volume primarily focuses on the application of the knowledge that promotes ideas for solving the problems of the society through cutting-edge technologies. The articles featured in this proceeding provide novel ideas that contribute to the growth of world class research and development. The contents of this volume will be of interest to researchers and professionals alike.

Big data analytics and cloud computing is the fastest growing technologies in current era. This text book serves as a purpose in providing an understanding of big data principles and framework at the beginner?s level. The text book covers various essential concepts of big-data analytics and processing tools such as HADOOP and YARN. The Textbook covers an analogical understanding on bridging cloud computing with big-data technologies with essential cloud infrastructure protocol and ecosystem concepts. PART I: Hadoop Distributed File System Basics, Running Example Programs and Benchmarks, Hadoop MapReduce Framework Essential Hadoop Tools, Hadoop YARN Applications, Managing Hadoop with Apache Ambari, Basic Hadoop Administration Procedures PART II: Introduction to Cloud Computing: Origins and Influences, Basic Concepts and Terminology, Goals and Benefits, Risks and Challenges. Fundamental Concepts and Models: Roles and Boundaries, Cloud Characteristics, Cloud Delivery Models, Cloud Deployment Models. Cloud Computing Technologies: Broadband networks and internet architecture, data center technology, virtualization technology, web technology, multi-tenant technology, service Technology Cloud Infrastructure Mechanisms: Logical Network Perimeter, Virtual Server, Cloud Storage Device, Cloud Usage Monitor, Resource Replication, Ready-made environment

Clouds are being positioned as the next-generation consolidated, centralized, yet federated IT infrastructure for hosting all kinds of IT platforms and for deploying, maintaining, and managing a wider variety of personal, as well as professional applications and services. Handbook of Research on Cloud Infrastructures for Big Data Analytics focuses exclusively on the topic of cloud-sponsored big data analytics for creating flexible and futuristic organizations. This book helps researchers and practitioners, as well as business entrepreneurs, to make informed decisions and consider appropriate action to simplify and streamline the arduous journey towards smarter enterprises.

Big data has presented a number of opportunities across industries. With these opportunities come a number of challenges associated with handling, analyzing, and storing large data sets. One solution to this challenge is cloud computing, which supports a massive storage and computation facility in order to accommodate big data processing. Managing and Processing Big Data in Cloud Computing explores the challenges of supporting big data processing and cloud-based platforms as a proposed solution. Emphasizing a number of crucial topics such as data analytics, wireless networks, mobile clouds, and machine learning, this publication meets the research needs of data analysts, IT professionals, researchers, graduate students, and educators in the areas of data science, computer programming, and IT development.

"This book focuses on the applications, issues, and challenges in the convergence of the internet of things, big data, and cloud computing"--

The definitive guide to successfully integrating social, mobile, Big-Data analytics, cloud and IoT principles and technologies The main goal of this book is to spur the development of effective big-data computing operations on smart clouds that are fully supported by IoT sensing, machine learning and analytics systems. To that end, the authors draw upon their original research and proven track record in the field to describe a practical approach integrating big-data theories, cloud design principles, Internet of Things (IoT) sensing, machine learning, data analytics and Hadoop and Spark programming. Part 1 focuses on data science, the roles of clouds and IoT devices and frameworks for big-data computing. Big data analytics and cognitive machine learning, as well as cloud architecture, IoT and cognitive systems are explored, and mobile cloud-IoT-interaction frameworks are illustrated with concrete system design examples. Part 2 is devoted to the principles of and algorithms for machine learning, data analytics and deep learning in big data applications. Part 3 concentrates on cloud programming software libraries from MapReduce to Hadoop, Spark and TensorFlow and describes business, educational, healthcare and social media applications for those tools. The first book describing a practical approach to integrating social, mobile, analytics, cloud and IoT (SMACT) principles and technologies Covers theory and computing techniques and technologies, making it suitable for use in both computer science and electrical engineering programs Offers an extremely well-informed vision of future intelligent and cognitive computing environments integrating SMACT technologies Fully illustrated throughout with examples, figures and approximately 150 problems to support and reinforce learning Features a companion website with an instructor manual and PowerPoint slides www.wiley.com/go/hwangIOT Big-Data Analytics for Cloud, IoT and Cognitive Computing satisfies the demand among university faculty and students for cutting-edge information on emerging intelligent and cognitive computing systems and technologies. Professionals working in data science, cloud computing and IoT applications will also find this book to be an extremely useful working resource.

This book presents a detailed review of high-performance computing infrastructures for next-generation big data and fast data analytics. Features: includes case studies and learning activities throughout the book and self-study exercises in every chapter; presents detailed case studies on social media analytics for intelligent businesses and on big data analytics (BDA) in the healthcare sector; describes the network infrastructure requirements for effective transfer of big data, and the storage infrastructure requirements of applications which generate big data; examines real-time analytics solutions; introduces in-database processing and in-memory analytics techniques for data mining; discusses the use of mainframes for handling real-time big data and the latest types of data management systems for BDA; provides information on the use of cluster, grid and cloud computing systems for BDA; reviews the peer-to-peer techniques and tools and the common information visualization techniques, used in BDA. "This book addresses the newest innovative and intelligent applications related to utilizing the large amounts of big data being generated that is increasingly driving decision making and changing the landscape of business intelligence, from governments to private organizations, from communities to individuals"--

This book provides a written record of the synergy that already exists among the research communities and represents a solid framework in the advancement of big data and cloud computing disciplines from which new interaction will result in the future. This book is a compendium of the International Conference on Big Data and Cloud Computing (ICBDCC 2021). It includes recent advances in big data analytics, cloud computing, the Internet of nano things, cloud security, data analytics in the cloud, smart cities and grids, etc. This book primarily focuses on the application of knowledge that promotes ideas for solving the problems of society through cutting-edge technologies. The articles featured in this book provide novel ideas that contribute to the growth of world-class research and development. The contents of this book are of interest to researchers and professionals alike.

Handbook of Research on Cloud Computing and Big Data Applications in IoT

Big Data, IoT, and Machine Learning

A Guide for Business and Technology Managers

Systems Simulation and Modeling for Cloud Computing and Big Data Applications

Handbook of Research on Cloud Infrastructures for Big Data Analytics

Due to market forces and technological evolution, Big Data computing is developing at an increasing rate. A wide variety of novel approaches and tools have emerged to tackle the challenges of Big Data, creating both more opportunities and more challenges for students and professionals in the field of data computation and analysis. Presenting a mix of industry cases and theory, Big Data Computing discusses the technical and practical issues related to Big Data in intelligent information management. Emphasizing the adoption and diffusion of Big Data tools and technologies in industry, the book introduces a broad range of Big Data concepts, tools, and techniques. It covers a wide range of research, and provides comparisons between state-of-the-art approaches. Comprised of five sections, the book focuses on: What Big Data is and why it is important Semantic technologies Tools and methods Business and economic perspectives Big Data applications across industries

Cloud Computing and Big Data technologies have become the new descriptors of the digital age. The global amount of digital data has increased more than nine times in volume in just five years and by 2030 its volume may reach a staggering 65 trillion gigabytes. This explosion of data has led to opportunities and transformation in various areas such as healthcare, enterprises, industrial manufacturing and transportation. New Cloud Computing and Big Data endow researchers and analysts with novel techniques and opportunities to collect, manage and analyze the vast quantities of data. In Cloud and Big Data Analytics, Swarm Intelligence and Deep Learning are two developing type of Machine Learning techniques that show enormous potential for solving complex business problems. Deep Learning enables computers to analyze large quantities of unstructured and binary data and to deduce relationships without requiring specific models or programming instructions. This book introduces the state-of-the-art trends and advances in the use of Machine Learning in Cloud and Big Data Analytics. The book will serve as a reference for data scientists, systems architects, developers, new researchers and graduate level students in Computer and Data Science. The book will describe the concepts necessary to understand current Machine Learning issues, challenges and possible solutions as well as upcoming trends in Big Data Analytics.

The internet of things (IoT) has emerged to address the need for connectivity and seamless integration with other devices as well as big data platforms for analytics. However, there are challenges that IoT-based applications face including design and implementation issues: connectivity problems: data gathering, storing, and analyzing in cloud-based environments: and IoT security and privacy issues. Emerging Trends in IoT and Integration with Data Science, Cloud Computing, and Big Data Analytics is a critical reference source that provides theoretical frameworks and research findings on IoT and big data integration. Highlighting topics that include wearable sensors, machine learning, machine intelligence, and mobile computing, this book serves professionals who want to improve their understanding of the strategic role of trust at different levels of the information and knowledge society. It is therefore of most value to data scientists, computer scientists, data analysts, IT specialists, academicians, professionals, researchers, and students working in the field of information and knowledge management in various disciplines that include but are not limited to information and communication sciences, administrative sciences and management, education, sociology, computer science, etc. Moreover, the book provides insights and supports executives concerned with the management of expertise, knowledge, information, and organizational development in different types of work communities and environments.

This book constitutes the refereed proceedings of the First International Conference on Big Data Analytics, BDA 2012, held in New Delhi, India, in December 2012. The 5 regular papers and 5 short papers presented were carefully reviewed and selected from 42 submissions. The volume also contains two tutorial papers in the section perspectives on big data analytics. The regular contributions are organized in topical sections on: data analytics applications: knowledge discovery through information extraction: and data models in analytics.

Theory, Algorithms and Applications

First International Conference, BDA 2012, New Delhi, India, December 24-26, 2012, Proceedings

Big Data Computing

Challenges and Opportunities for the Convergence of IoT, Big Data, and Cloud Computing

Managing and Processing Big Data in Cloud Computing

Advances in Big Data and Cloud Computing

Big Data: Principles and Paradigms captures the state-of-the-art research on the architectural aspects, technologies, and applications of Big Data. The book identifies potential future directions and technologies that facilitate insight into numerous scientific, business, and consumer applications. To help realize Big Data's full potential, the book addresses numerous challenges, offering the conceptual and technological solutions for tackling them. These challenges include life-cycle data management, large-scale storage, flexible processing infrastructure, data modeling, scalable machine learning, data analysis algorithms, sampling techniques, and privacy and ethical issues. Covers computational platforms supporting Big Data applications Addresses key principles underlying Big Data computing Examines key developments supporting next generation Big Data platforms Explores the challenges in Big Data computing and ways to overcome them Contains expert contributors from both academia and industry

This book is a compendium of the proceedings of the International Conference on Big-Data and Cloud Computing. It includes recent advances in the areas of big data analytics, cloud computing, the Internet of nano things, cloud security, data analytics in the cloud, smart cities and grids, etc. Primarily focusing on the application of knowledge that promotes ideas for solving the problems of the society through cutting-edge technologies, it provides novel ideas that further world-class research and development. This concise compilation of articles approved by a panel of expert reviewers is an invaluable resource for researchers in the area of advanced engineering sciences.

Vehicular traffic congestion and accidents remain universal issues in today's world. Due to the continued growth in the use of vehicles, optimizing traffic management operations is an immense challenge. To reduce the number of traffic accidents, improve the performance of transportation systems, enhance road safety, and protect the environment, vehicular ad-hoc networks have been introduced. Current developments in wireless communication, computing paradigms, big data, and cloud computing enable the enhancement of these networks, equipped with wireless communication capabilities and high-performance processing tools. Cloud-Based Big Data Analytics in Vehicular Ad-Hoc Networks is a pivotal reference source that provides vital research on cloud and data analytic applications in intelligent transportation systems. While highlighting topics such as location routing, accident detection, and data warehousing, this publication addresses future challenges in vehicular ad-hoc networks and presents viable solutions. This book is ideally designed for researchers, computer scientists, engineers, automobile industry professionals, IT practitioners, academicians, and students seeking current research on cloud computing models in vehicular networks.

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Big-Data Analytics and Cloud Computing

Big Data For Dummies

Big Data Analytics

Lessons from Key Industries and Economies in the Global South

Security and Privacy Trends in Cloud Computing and Big Data

Proceedings of ICBDCC 2021

Find the right big data solution for your business ororganization Big data management is one of the major challenges facingbusiness, industry, and not-for-profit organizations. Data setssuch as customer transactions for a mega-retailer, weather patternsmonitored by meteorologists, or social network activity can quicklyoutpace the capacity of traditional data management tools. If youneed to develop or manage big data solutions, you'll appreciate howthese four experts define, explain, and guide you through this newand often confusing concept. You'll learn what it is, why itmatters, and how to choose and implement solutions that work. Effectively managing big data is an issue of growing importanceto businesses, not-for-profit organizations, government, and ITprofessionals Authors are experts in information management, big data, and avariety of solutions Explains big data in detail and discusses how to select andimplement a solution, security concerns to consider, data storageand presentation issues, analytics, and much more Provides essential information in a no-nonsense,easy-to-understand style that is empowering Big Data For Dummies cuts through the confusion and helpsyou take charge of big data solutions for your organization.

The idea behind this book is to simplify the journey of aspiring readers and researchers to understand Big Data, IoT and Machine Learning. It also includes various real-time/offline applications and case studies in the fields of engineering, computer science, information security and cloud computing using modern tools. This book consists of two sections: Section I contains the topics related to Applications of Machine Learning, and Section II addresses issues about Big Data, the Cloud and the Internet of Things. This brings all the related technologies into a single source so that undergraduate and postgraduate students, researchers, academicians and people in industry can easily understand them. Features Addresses the complete data science technologies workflow Explores basic and high-level concepts and services as a manual for those in the industry and at the same time can help beginners to understand both basic and advanced aspects of machine learning Covers data processing and security solutions in IoT and Big Data applications Offers adaptive, robust, scalable and reliable applications to develop solutions for day-to-day problems Presents security issues and data migration techniques of NoSQL databases

Cloud computing has proven to be a successful paradigm of service-oriented computing, and has revolutionized the way computing infrastructures are abstracted and used. By means of cloud computing technology, massive data can be managed effectively and efficiently to support various aspects of problem solving and decision making. Managing Big Data in Cloud Computing Environments explores the latest advancements in the area of data management and analysis in the cloud. Providing timely, research-based information relating to data storage, sharing, extraction, and indexing in cloud systems, this publication is an ideal reference source for graduate students, IT specialists, researchers, and professionals working in the areas of data and knowledge engineering.

Today, cloud computing, big data, and the internet of things (IoT) are becoming indubitable parts of modern information and communication systems. They cover not only information and communication technology but also all types of systems in society including within the realms of business, finance, industry, manufacturing, and management. Therefore, it is critical to remain up-to-date on the latest advancements and applications, as well as current issues and challenges. The Handbook of Research on Cloud Computing and Big Data Applications in IoT is a pivotal reference source that provides relevant theoretical frameworks and the latest empirical research findings on principles, challenges, and applications of cloud computing, big data, and IoT. While highlighting topics such as fog computing, language interaction, and scheduling algorithms, this publication is ideally designed for software developers, computer engineers, scientists, professionals, academicians, researchers, and students.

Cloud Computing Enabled Big-data Analytics in Wireless Ad-hoc Networks

Proceedings of ICBDCC18

Applications of Machine Learning in Big-Data Analytics and Cloud Computing

A Beginner's Guide

This illuminating text/reference surveys the state of the art in data science, and provides practical guidance on big data analytics. Expert perspectives are provided by authoritative researchers and practitioners from around the world, discussing research developments and emerging trends, presenting case studies on helpful frameworks and innovative methodologies, and suggesting best practices for efficient and effective data analytics. Features: reviews a framework for fast data applications, a technique for complex event processing, and agglomerative approaches for the partitioning of networks; introduces a unified approach to data modeling and management, and a distributed computing perspective on interfacing physical and cyber worlds; presents techniques for machine learning for big data, and identifying duplicate records in data repositories; examines enabling technologies and tools for data mining; proposes frameworks for data extraction, and adaptive decision making and social media analysis.

This book focuses on big data in business intelligence, data management, machine learning, cloud computing, and smart cities. It also provides an interdisciplinary platform to present and discuss recent innovations, trends, and concerns in the fields of big data and analytics. Big Data Analysis for Green Computing: Concepts and Applications presents the latest technologies and covers the major challenges, issues, and advances of big data and data analytics in green computing. It explores basic as well as high-level concepts. It also includes the use of machine learning using big data and discusses advanced system implementation for smart cities. The book is intended for business and management educators, management researchers, doctoral scholars, university professors, policymakers, and higher academic research organizations.

This book reviews the theoretical concepts, leading-edge techniques and practical tools involved in the latest multi-disciplinary approaches addressing the challenges of big data. Illuminating perspectives from both academia and industry are presented by an international selection of experts in big data science. Topics and features: describes the innovative advances in theoretical aspects of big data, predictive analytics and cloud-based architectures; examines the applications and implementations that utilize big data in cloud architectures; surveys the state of the art in architectural approaches to the provision of cloud-based big data analytics functions; identifies potential research directions and technologies to facilitate the realization of emerging business models through big data approaches; provides relevant theoretical frameworks, empirical research findings, and numerous case studies; discusses real-world applications of algorithms and techniques to address the challenges of big datasets.

Cloud computing and big data are arguably the most significant forces in information technology today. In the wake of revelations about National Security Agency (NSA) activities, many of which occur "in the cloud", this book offers both enlightenment and a critical view. Vincent Mosco explores where the cloud originated, what it means, and how important it is for business, government and citizens. He describes the intense competition among cloud companies like Amazon and Google, the spread of the cloud to government agencies like the controversial NSA, and the astounding growth of entire cloud cities in China. Is the cloud the long-promised information utility that will solve many of the world's economic and social problems? Or is it just marketing hype? To the Cloud provides the first thorough analysis of the potential and the problems of a technology that may very well disrupt the world.