

Big Data Using Smart Big Data Analytics And Metrics To Make Better Decisions And Improve Performance

Less than 0.5 per cent of all data is currently analysed and used. However, business leaders and managers cannot afford to be unconcerned or sceptical about data. Data is revolutionizing the way we work and it is the companies that view data as a strategic asset that will survive and thrive. Bernard Marr's Data Strategy is a must-have guide to creating a robust data strategy. Explaining how to identify your strategic data needs, what methods to use to collect the data and, most importantly, how to translate your data into organizational insights for improved business decision-making and performance, this is essential reading for anyone aiming to leverage the value of their business data and gain competitive advantage. Packed with case studies and real-world examples, advice on how to build data competencies in an organization and crucial coverage of how to ensure your data doesn't become a liability, Data Strategy will equip any organization with the tools and strategies it needs to profit from big data, analytics and the Internet of Things.

Data availability is surpassing existing paradigms for governing, managing, analyzing, and interpreting health data. Big Data and Health Analytics provides frameworks, use cases, and examples that illustrate the role of big data and analytics in modern health care, including how public health information can inform health delivery. Written for health

Machine Learning, Big Data, and IoT for Medical Informatics focuses on the latest techniques adopted in the field of medical informatics. In medical informatics, machine learning, big data, and IOT-based techniques play a significant role in disease diagnosis and its prediction. In the medical field, the structure of data is equally important for accurate predictive analytics due to heterogeneity of data such as ECG data, X-ray data, and image data. Thus, this book focuses on the usability of machine learning, big data, and IOT-based techniques in handling structured and unstructured data. It also emphasizes on the privacy preservation techniques of medical data. This volume can be used as a reference book for scientists, researchers, practitioners, and academicians working in the field of intelligent medical informatics. In addition, it can also be used as a reference book for both undergraduate and graduate courses such as medical informatics, machine learning, big data, and IoT. Explains the uses of CNN, Deep Learning and extreme machine learning concepts for the design and development of predictive diagnostic systems. Includes several privacy preservation techniques for medical data. Presents the integration of Internet of Things with predictive diagnostic systems for disease diagnosis. Offers case studies and applications relating to machine learning, big data, and health care analysis.

Homework assignments that learn from students. Courses tailored to fit individual pupils. Textbooks that talk back. This is tomorrow's education landscape, thanks to the power of big data. These advances go beyond the much-discussed rise of online courses. As the New York Times bestselling authors of Big Data explain, the truly fascinating changes are actually occurring in how we measure students' progress and how we can use that data to improve education for everyone, in real time, both on- and offline. Learning with Big Data offers an eye-opening, insight-packed tour through these new trends, for educators, administrators, and readers interested in the latest developments in business and technology.

This book covers a range of topics including selective technologies and algorithms that can potentially contribute to developing an intelligent environment and smarter cities. While the connectivity and efficiency of smart cities is important, the analysis of the impact of construction development and large projects in the city is crucial to decision and policy makers, before the project is approved. This book also presents an agenda for future investigations to address the need for advanced tools such as mobile scanners, Geospatial Artificial Intelligence, Unmanned Aerial Vehicles, Geospatial Augmented Reality apps, Light Detection, and Ranging in smart cities. Some of selected specific tools presented in this book are as a simulator for improving the smart parking practices by modelling drivers with activity plans, a bike optimization algorithm to increase the efficiency of bike stations, an agent-based model simulation of human mobility with the use of mobile phone datasets. In addition, this book describes the use of numerical methods to match the network demand and supply of bicycles, investigate the distribution of railways using different indicators, presents a novel algorithm of direction-aware continuous moving K-nearest neighbor queries in road networks, and presents an efficient staged evacuation planning algorithm for multi-exit buildings.

"The chapters in this volume offer useful case studies, technical roadmaps, lessons learned, and a few prescriptions to do this, avoid that." -From the Foreword by Joe LaCugna, Ph.D., Enterprise Analytics and Business Intelligence, Starbucks Coffee Company With the growing barrage of "big data," it becomes vitally important for organizations to mak

The best-selling author of Big Data is back, this time with a unique and in-depth insight into how specific companies use big data. Big data is on the tip of everyone's tongue. Everyone understands its power and importance, but many fail to grasp the actionable steps and resources required to utilise it effectively. This book fills the knowledge gap by showing how major companies are using big data every day, from an up-close, on-the-ground perspective. From technology, media and retail, to sport teams, government agencies and financial institutions, learn the actual strategies and processes being used to learn about customers, improve manufacturing, spur innovation, improve safety and so much more. Organised for easy dip-in navigation, each chapter follows the same structure to give you the information you need quickly. For each company profiled, learn what data was used, what problem it solved and the processes put it place to make it practical, as well as the technical details, challenges and lessons learned from each unique scenario. Learn how predictive analytics helps Amazon, Target, John Deere and Apple understand their customers Discover how big data is behind the success of Walmart, LinkedIn, Microsoft and more Learn how big data is changing medicine, law enforcement, hospitality, fashion, science and banking Develop your own big data strategy by accessing additional reading materials at the end of each chapter

Building Big Data Applications helps data managers and their organizations make the most of unstructured data with an existing data warehouse. It provides readers with what they need to know to make sense of how Big Data fits into the world of Data Warehousing. Readers will learn about infrastructure options and integration and come away with a solid understanding on how to leverage various architectures for integration. The book includes a wide range of use cases that will help data managers visualize reference architectures in the context of specific industries (healthcare, big oil, transportation, software, etc.). Explores various ways to leverage Big Data by effectively integrating it into the data warehouse Includes real-world case studies which clearly demonstrate Big Data technologies Provides insights on how to optimize current data warehouse infrastructure and integrate newer infrastructure matching data processing workloads and requirements

A revelatory exploration of the hottest trend in technology and the dramatic impact it will have on the economy, science, and society at large. Which paint color is most likely to tell you that a used car is in good shape? How can officials identify the most dangerous New York City manholes before they explode? And how did Google searches predict the spread of the H1N1 flu outbreak? The key to answering these questions, and many more, is big data. "Big data" refers to our burgeoning ability to crunch vast collections of information, analyze it instantly, and draw sometimes profoundly surprising conclusions from it. This emerging science can translate myriad phenomena—from the price of airline tickets to the text of millions of books—into searchable form, and uses our increasing computing power to unearth epiphanies that we never could have seen before. A revolution on par with the Internet or perhaps even the printing press, big data will change the way we think about business, health, politics, education, and innovation in the years to come. It also poses fresh threats, from the inevitable end of privacy as we know it to the

prospect of being penalized for things we haven't even done yet, based on big data's ability to predict our future behavior. In this brilliantly clear, often surprising work, two leading experts explain what big data is, how it will change our lives, and what we can do to protect ourselves from its hazards. Big Data is the first big book about the next big thing. www.big-data-book.com Big Data Application in Power Systems brings together experts from academia, industry and regulatory agencies who share their understanding and discuss the big data analytics applications for power systems diagnostics, operation and control. Recent developments in monitoring systems and sensor networks dramatically increase the variety, volume and velocity of measurement data in electricity transmission and distribution level. The book focuses on rapidly modernizing monitoring systems, measurement data availability, big data handling and machine learning approaches to process high dimensional, heterogeneous and spatiotemporal data. The book chapters discuss challenges, opportunities, success stories and pathways for utilizing big data value in smart grids. Provides expert analysis of the latest developments by global authorities Contains detailed references for further reading and extended research Provides additional cross-disciplinary lessons learned from broad disciplines such as statistics, computer science and bioinformatics Focuses on rapidly modernizing monitoring systems, measurement data availability, big data handling and machine learning approaches to process high dimensional, heterogeneous and spatiotemporal data

This book discusses emerging technologies in the field of the Internet of Things and big data, an area that will be scaled in next two decades. Written by a team of leading experts, it is the only book focusing on the broad areas of both the Internet of things and big data. The thirteen chapters present real-time experimental methods and theoretical explanations, as well as the implementation of these technologies through various applications. Offering a blend of theory and hands-on practices, the book enables graduate, postgraduate and research students who are involved in real-time project scaling techniques to understand projects and their execution. It is also useful for senior computer students, researchers and industry workers who are involved in experimenting with the Internet of Things and big data technologies, helping them to solve the real-time problem. Moreover, the chapters covering cutting-edge technologies help multidisciplinary researchers who are bridging the gap of two different outset real-time problems.

Capitalise on big data to add value to your small business Written by bestselling author and big data expert Bernard Marr, Big Data For Small Business For Dummies helps you understand what big data actually is—and how you can analyse and use it to improve your business. Free of confusing jargon and complemented with lots of step-by-step guidance and helpful advice, it quickly and painlessly helps you get the most from using big data in a small business. Business data has been around for a long time. Unfortunately, it was trapped away in overcrowded filing cabinets and on archaic floppy disks. Now, thanks to technology and new tools that display complex databases in a much simpler manner, small businesses can benefit from the big data that's been hiding right under their noses. With the help of this friendly guide, you'll discover how to get your hands on big data to develop new offerings, products and services; understand technological change; create an infrastructure; develop strategies; and make smarter business decisions. Shows you how to use big data to make sense of user activity on social networks and customer transactions Demonstrates how to capture, store, search, share, analyse and visualise analytics Helps you turn your data into actionable insights Explains how to use big data to your advantage in order to transform your small business If you're a small business owner or employee, Big Data For Small Business For Dummies helps you harness the hottest commodity on the market today in order to take your company to new heights.

Mobility Patterns, Big Data and Transport Analytics provides a guide to the new analytical framework and its relation to big data, focusing on capturing, predicting, visualizing and controlling mobility patterns - a key aspect of transportation modeling. The book features prominent international experts who provide overviews on new analytical frameworks, applications and concepts in mobility analysis and transportation systems. Users will find a detailed, mobility 'structural' analysis and a look at the extensive behavioral characteristics of transport, observability requirements and limitations for realistic transportation applications and transportation systems analysis that are related to complex processes and phenomena. This book bridges the gap between big data, data science, and transportation systems analysis with a study of big data's impact on mobility and an introduction to the tools necessary to apply new techniques. The book covers in detail, mobility 'structural' analysis (and its dynamics), the extensive behavioral characteristics of transport, observability requirements and limitations for realistic transportation applications, and transportation systems analysis related to complex processes and phenomena. The book bridges the gap between big data, data science, and Transportation Systems Analysis with a study of big data's impact on mobility, and an introduction to the tools necessary to apply new techniques. Guides readers through the paradigm-shifting opportunities and challenges of handling Big Data in transportation modeling and analytics Covers current analytical innovations focused on capturing, predicting, visualizing, and controlling mobility patterns, while discussing future trends Delivers an introduction to transportation-related information advances, providing a benchmark reference by world-leading experts in the field Captures and manages mobility patterns, covering multiple purposes and alternative transport modes, in a multi-disciplinary approach Companion website features videos showing the analyses performed, as well as test codes and data-sets, allowing readers to recreate the presented analyses and apply the highlighted techniques to their own data

This book is aimed at students in communications and signal processing who want to extend their skills in the energy area. It describes power systems and why these backgrounds are so useful to smart grid, wireless communications being very different to traditional wireline communications.

Big Data Using SMART Big Data, Analytics and Metrics To Make Better Decisions and Improve Performance John Wiley & Sons

By implementing a comprehensive data analytics program, utility companies can meet the continually evolving challenges of modern grids that are operationally efficient, while reconciling the demands of greenhouse gas legislation and establishing a meaningful return on investment from smart grid deployments. Readable and accessible, Big Data Analytic

Build next-generation Artificial Intelligence systems with Java Key Features Implement AI techniques to build smart applications using Deep learning 4j Perform big data analytics to derive quality insights using Spark MLlib Create self-learning systems using neural networks, NLP, and reinforcement learning Book Description In this age of big data, companies have larger amount of consumer data than ever before, far more than what the current technologies can ever hope to keep up with. However, Artificial Intelligence closes the gap by moving past human limitations in order to analyze data. With the help of Artificial Intelligence for big data, you will learn to use Machine Learning algorithms such as k-means, SVM, RBF, and regression to perform advanced data analysis. You will understand the current status of Machine and Deep Learning techniques to work on

Genetic and Neuro-Fuzzy algorithms. In addition, you will explore how to develop Artificial Intelligence algorithms to learn from data, why they are necessary, and how they can help solve real-world problems. By the end of this book, you'll have learned how to implement various Artificial Intelligence algorithms for your big data systems and integrate them into your product offerings such as reinforcement learning, natural language processing, image recognition, genetic algorithms, and fuzzy logic systems. What you will learn Manage Artificial Intelligence techniques for big data with Java Build smart systems to analyze data for enhanced customer experience Learn to use Artificial Intelligence frameworks for big data Understand complex problems with algorithms and Neuro-Fuzzy systems Design stratagems to leverage data using Machine Learning process Apply Deep Learning techniques to prepare data for modeling Construct models that learn from data using open source tools Analyze big data problems using scalable Machine Learning algorithms Who this book is for This book is for you if you are a data scientist, big data professional, or novice who has basic knowledge of big data and wish to get proficiency in Artificial Intelligence techniques for big data. Some competence in mathematics is an added advantage in the field of elementary linear algebra and calculus.

The agricultural sector can benefit immensely from developments in the field of smart farming. However, this research area focuses on providing specific fixes to particular situations and falls short on implementing data-driven frameworks that provide large-scale benefits to the industry as a whole. Using deep learning can bring immense data and improve our understanding of various earth sciences and improve farm services to yield better crop production and profit.

Smart Agricultural Services Using Deep Learning, Big Data, and IoT is an essential publication that focuses on the application of deep learning to agriculture. While highlighting a broad range of topics including crop models, cybersecurity, and sustainable agriculture, this book is ideally designed for engineers, programmers, software developers, agriculturalists, farmers, policymakers, researchers, academicians, and students.

This book is open access under a CC BY 4.0 license. This book sheds new light on a selection of big data scenarios from an interdisciplinary perspective. It features legal, sociological and economic approaches to fundamental big data topics such as privacy, data quality and the ECJ's Safe Harbor decision on the one hand, and practical applications such as smart cars, wearables and web tracking on the other. Addressing the interests of researchers and practitioners alike, it provides a comprehensive overview of and introduction to the emerging challenges regarding big data. All contributions are based on papers submitted in connection with ABIDA (Assessing Big Data), an interdisciplinary research project exploring the societal aspects of big data and funded by the German Federal Ministry of Education and Research. This volume was produced as a part of the ABIDA project (Assessing Big Data, 01IS15016A-F). ABIDA is a four-year collaborative project funded by the Federal Ministry of Education and Research. However the views and opinions expressed in this book reflect only the authors' point of view and not necessarily those of all members of the ABIDA project or the Federal Ministry of Education and Research.

Big Data Analytics with R and Hadoop is a tutorial style book that focuses on all the powerful big data tasks that can be achieved by integrating R and Hadoop. This book is ideal for R developers who are looking for a way to perform big data analytics with Hadoop. This book is also aimed at those who know Hadoop and want to build some intelligent applications over Big data with R packages. It would be helpful if readers have basic knowledge of R.

Big Data Analytics in Cyber-Physical Systems: Machine Learning for the Internet of Things examines sensor signal processing, IoT gateways, optimization and decision-making, intelligent mobility, and implementation of machine learning algorithms in embedded systems. This book focuses on the interaction between IoT technology and the mathematical tools used to evaluate the extracted data of those systems. Each chapter provides the reader with a broad list of data analytics and machine learning methods for multiple IoT applications. Additionally, this volume addresses the educational transfer needed to incorporate these technologies into our society by examining new platforms for IoT in schools, new courses and concepts for universities and adult education on IoT and data science. . Bridges the gap between IoT, CPS, and mathematical modelling. Features numerous use cases that discuss how concepts are applied in different domains and applications. Provides "best practices", "winning stories" and "real-world examples" to complement innovation. Includes highlights of mathematical foundations of signal processing and machine learning in CPS and IoT.

There currently is no in-depth book dedicated to the challenge of the Internet of Everything and Big Data technologies in smart cities. Humankind today is confronting a critical worldwide portability challenge and the framework that moves cities must keep pace with the innovation. Internet of Everything and Big Data: Major Challenges in Smart Cities reviews the applications, technologies, standards, and other issues related to smart cities. This book is dedicated to addressing the major challenges in realizing smart cities and sensing platforms in the era of Big Data cities and Internet of Everything. Challenges vary from cost and energy efficiency to availability and service quality. This book examines security issues and challenges, addresses the total information science challenges, covers exploring and creating IoT environment-related sales adaptive systems, and investigates basic and high-level concepts using the latest techniques implemented by researchers and businesses. The book is written for analysts, researchers, and specialists who are working on the future generation of the technologies. It will serve as a valuable guide for those in the industry, and students as well.

Big Data Analytics and Intelligent Techniques for Smart Cities covers fundamentals, advanced concepts, and applications of big data analytics for smart cities in a single volume. This comprehensive reference text discusses big data theory modeling and simulation for smart cities and examines case studies in a single volume. The text discusses how to develop a smart city and state-of-the-art system design, system verification, real-time control and adaptation, Internet of Things, and testbeds. It covers applications of smart cities as they relate to smart transportation/connected vehicle (CV) and intelligent transportation systems (ITS) for improved mobility, safety, and environmental protection. It will be useful as a reference text for graduate students in different areas including electrical engineering, computer science engineering, civil engineering, and electronics and communications engineering. Features: Technologies and algorithms associated with the application of big data for smart cities Discussions on big data theory modeling and simulation for smart cities Applications of smart cities as they relate to smart transportation and intelligent transportation systems (ITS) Discussions on concepts including smart education, smart culture, and smart transformation management for social and societal changes

"Many applications generate large datasets, like social networking and social influence programs, smart cities applications, smart house environments, Cloud applications, public web sites, scientific experiments and simulations, data warehouse, monitoring platforms, and e-government services. This book will primarily encompass practical approaches that advance research in all aspects of data processing, data analytics, data processing in Cloud/Edge/Fog systems, having a large variety of tools and software to manage them. The book focuses on focuses on topics covering algorithms, architectures, management models, high performance computing techniques and large-scale distributed systems"-- Big Data Analytics and Intelligence is essential reading for researchers and experts working in the fields of health care, data science, analytics, the internet of things, and information retrieval. 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.

Data Science and Big Data Analytics is about harnessing the power of data for new insights. The book covers the breadth of activities and methods and tools that Data Scientists use. The content focuses on concepts, principles and practical applications that are applicable to any industry and technology environment, and the learning is supported and explained with examples that you can replicate using open-source software. This book will help you: Become a contributor on a data science team Deploy a structured lifecycle approach to data analytics problems Apply appropriate analytic techniques and tools to analyzing big data Learn how to tell a compelling story with data to drive business action Prepare for EMC Proven Professional Data Science Certification Corresponding data sets are available from the book's page at Wiley which you can find on the Wiley site by searching for the ISBN 9781118876138. Get started discovering, analyzing, visualizing, and presenting data in a meaningful way today!

Utilize R to uncover hidden patterns in your Big Data About This Book Perform computational analyses on Big Data to generate meaningful results Get a practical knowledge of R programming language while working on Big Data platforms like Hadoop, Spark, H2O and SQL/NoSQL databases, Explore fast, streaming, and scalable data analysis with the most cutting-edge technologies in the market Who This Book Is For This book is intended for Data Analysts, Scientists, Data Engineers, Statisticians, Researchers, who want to integrate R with their current or future Big Data workflows. It is assumed that readers have some experience in data analysis and understanding of data management and algorithmic processing of large quantities of data, however they may lack specific skills related to R. What You Will Learn Learn about current state of Big Data processing using R programming language and its powerful statistical capabilities Deploy Big Data analytics platforms with selected Big Data tools supported by R in a cost-effective and time-saving manner Apply the R language to real-world Big Data problems on a multi-node Hadoop cluster, e.g. electricity consumption across various socio-demographic indicators and bike share scheme usage Explore the compatibility of R with Hadoop, Spark, SQL and NoSQL databases, and H2O platform In Detail Big Data analytics is the process of examining large and complex data sets that often exceed the computational capabilities. R is a leading programming language of data science, consisting of powerful functions to tackle all problems related to Big Data processing. The book will begin with a brief introduction to the Big Data world and its current industry standards. With introduction to the R language and presenting its development, structure, applications in real world, and its shortcomings. Book will progress towards revision of major R functions for data management and transformations. Readers will be introduce to Cloud based Big Data solutions (e.g. Amazon EC2 instances and Amazon RDS, Microsoft Azure and its HDInsight clusters) and also provide guidance on R connectivity with relational and non-relational databases such as MongoDB and HBase etc. It will further expand to include Big Data tools such as Apache Hadoop ecosystem, HDFS and MapReduce frameworks. Also other R compatible tools such as Apache Spark, its machine learning library Spark MLlib, as well as H2O. Style and approach This book will serve as a practical guide to tackling Big Data problems using R programming language and its statistical environment. Each section of the book will present you with concise and easy-to-follow steps on how to process, transform and analyse large data sets.

This unique book demonstrates the utility of big data approaches in human geography and planning. Offering a carefully curated selection of case studies, it reveals how researchers are accessing big data, what this data looks like and how such data can offer new and important insights and knowledge.

Integrate big data into business to drive competitive advantage and sustainable success Big Data MBA brings insight and expertise to leveraging big data in business so you can harness the power of analytics and gain a true business advantage. Based on a practical framework with supporting methodology and hands-on exercises, this book helps identify where and how big data can help you transform your business. You'll learn how to exploit new sources of customer, product, and operational data, coupled with advanced analytics and data science, to optimize key processes, uncover monetization opportunities, and create new sources of competitive differentiation. The discussion includes guidelines for operationalizing analytics, optimal organizational

structure, and using analytic insights throughout your organization's user experience to customers and front-end employees alike. You'll learn to "think like a data scientist" as you build upon the decisions your business is trying to make, the hypotheses you need to test, and the predictions you need to produce. Business stakeholders no longer need to relinquish control of data and analytics to IT. In fact, they must champion the organization's data collection and analysis efforts. This book is a primer on the business approach to analytics, providing the practical understanding you need to convert data into opportunity. Understand where and how to leverage big data Integrate analytics into everyday operations Structure your organization to drive analytic insights Optimize processes, uncover opportunities, and stand out from the rest Help business stakeholders to "think like a data scientist" Understand appropriate business application of different analytic techniques If you want data to transform your business, you need to know how to put it to use. Big Data MBA shows you how to implement big data and analytics to make better decisions.

"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"--

Convert the promise of big data into real world results There is so much buzz around big data. We all need to know what it is and how it works - that much is obvious. But is a basic understanding of the theory enough to hold your own in strategy meetings? Probably. But what will set you apart from the rest is actually knowing how to USE big data to get solid, real-world business results - and putting that in place to improve performance. Big Data will give you a clear understanding, blueprint, and step-by-step approach to building your own big data strategy. This is a well-needed practical introduction to actually putting the topic into practice. Illustrated with numerous real-world examples from a cross section of companies and organisations, Big Data will take you through the five steps of the SMART model: Start with Strategy, Measure Metrics and Data, Apply Analytics, Report Results, Transform. Discusses how companies need to clearly define what it is they need to know Outlines how companies can collect relevant data and measure the metrics that will help them answer their most important business questions Addresses how the results of big data analytics can be visualised and communicated to ensure key decisions-makers understand them Includes many high-profile case studies from the author's work with some of the world's best known brands

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

Leverage big data to add value to your business Social media analytics, web-tracking, and other technologies help companies acquire and handle massive amounts of data to better understand their customers, products, competition, and markets. Armed with the insights from big data, companies can improve customer experience and products, add value, and increase return on investment. The tricky part for busy IT professionals and executives is how to get this done, and that's where this practical book comes in. Big Data: Understanding How Data Powers Big Business is a complete how-to guide to leveraging big data to drive business value. Full of practical techniques, real-world examples, and hands-on exercises, this book explores the technologies involved, as well as how to find areas of the organization that can take full advantage of big data. Shows how to decompose current business strategies in order to link big data initiatives to the organization's value creation processes Explores different value creation processes and models Explains issues surrounding operationalizing big data, including organizational structures, education challenges, and new big data-related roles Provides methodology worksheets and exercises so readers can apply techniques Includes real-world examples from a variety of organizations leveraging big data Big Data: Understanding How Data Powers Big Business is written by one of Big Data's preeminent experts, William Schmarzo. Don't miss his invaluable insights and advice.

Artificial Intelligence and Big Data Analytics for Smart Healthcare serves as a key reference for practitioners and experts involved in healthcare as they strive to enhance the value added of healthcare and develop more sustainable healthcare systems. It brings together insights from emerging sophisticated information and communication technologies such as big data analytics, artificial intelligence, machine learning, data science, medical intelligence, and, by dwelling on their current and prospective applications, highlights managerial and policymaking challenges they may generate. The book is split into five sections: big data infrastructure, framework and design for smart healthcare; signal processing techniques for smart healthcare applications; business analytics (descriptive, diagnostic, predictive and prescriptive) for smart healthcare; emerging tools and techniques for smart healthcare; and challenges (security, privacy, and policy) in big data for smart healthcare. The content is carefully developed to be understandable to different members of healthcare chain to leverage collaborations with researchers and industry. Presents a holistic discussion on the new landscape of data driven medical technologies including Big Data, Analytics, Artificial Intelligence, Machine Learning, and Precision Medicine Discusses such technologies with case study driven approach with reference to real world application and systems, to make easier the understanding to the reader not familiar with them Encompasses an international collaboration perspective, providing understandable knowledge to professionals involved with healthcare to leverage productive partnerships with technology developers

To continue providing people with safe, comfortable, and affordable places to live, cities must incorporate techniques and technologies to bring them into the future. The integration of big data and interconnected technology, along with the increasing population, will lead to the necessary creation of smart cities. Big Data Analytics for Smart and Connected Cities is a pivotal reference source that provides vital research on the application of the integration of interconnected technologies and big data analytics into the creation of smart cities. While highlighting topics such as energy conservation, public transit planning, and performance measurement, this publication explores technology integration in urban environments as well as the methods of planning cities to

implement these new technologies. This book is ideally designed for engineers, professionals, researchers, and technology developers seeking current research on technology implementation in urban settings.

The Internet of Things is changing the world. Thingalytics by Dr. John Bates is the most powerful book written to date about the Internet of Things (IoT), showing businesses how to take advantage of the fast Big Data that flows across the digital planet. Pulling from exciting examples of real-life innovation and invention, John makes IoT come alive. From digitally enriching exotic shops in Istanbul, Turkey, to crossing the USA on a sensor-enabled Greyhound Bus to finding new ways to mend people in hospital smart operating rooms, Thingalytics depicts how IoT can make our lives happier, easier, more productive and even safer. Thingalytics, a composite of “Things” and “Analytics,” shows businesses how to use real-time analytics and algorithms in order to seize the opportunities that flow from IoT, while simultaneously spotting and navigating around threats. As each real world object – from people to refrigerators, to tractors and ships or cans of fizzy pop - is digitized and connected to the Internet, it presents a unique opportunity for innovative businesses to learn from, and take advantage of, the digital vibrations it creates. Illustrated by case studies from global, visionary organizations such as Coca Cola, Greyhound Bus and Medtronic, Thingalytics highlights how the alchemy of real-time analytics and smart algorithms can help turn fast Big Data into actionable gold nuggets for any business, anywhere. Digital disruption to traditional “bricks-and-mortar” businesses is happening now.

Organizations must transform themselves using digital technologies. Time does not stand still in this brave, new digital world. “Digital Darwinism is unkind to those who wait,” says R “Ray” Wang, a leading industry analyst who has written the Foreword to Thingalytics. John Bates personally interviewed each of the people in this book. His deep knowledge of their vision, their businesses and their goals gives him the insight and the gravitas to explain how each organization is conquering the digital world. Winners in the IoT race will not only profit but could – just possibly – avert disaster. Thingalytics becomes very exciting when we see how lives can be saved, fraud avoided, customers delighted and carbon emissions reduced.

This book presents current progress on challenges related to Big Data management by focusing on the particular challenges associated with context-aware data-intensive applications and services. The book is a state-of-the-art reference discussing progress made, as well as prompting future directions on the theories, practices, standards and strategies that are related to the emerging computational technologies and their association with supporting the Internet of Things advanced functioning for organizational settings including both business and e-science. Apart from inter-operable and inter-cooperative aspects, the book deals with a notable opportunity namely, the current trend in which a collectively shared and generated content is emerged from Internet end-users. Specifically, the book presents advances on managing and exploiting the vast size of data generated from within the smart environment (i.e. smart cities) towards an integrated, collective intelligence approach. The book also presents methods and practices to improve large storage infrastructures in response to increasing demands of the data intensive applications. The book contains 19 self-contained chapters that were very carefully selected based on peer review by at least two expert and independent reviewers and is organized into the three sections reflecting the general themes of interest to the IoT and Big Data communities: Section I: Foundations and Principles Section II: Advanced Models and Architectures Section III: Advanced Applications and Future Trends The book is intended for researchers interested in joining interdisciplinary and transdisciplinary works in the areas of Smart Environments, Internet of Things and various computational technologies for the purpose of an integrated collective computational intelligence approach into the Big Data era.

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