

Analytics In A Big Data World The Essential Guide To Data Science And Its Applications Wiley And Sas Business Series

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

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 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

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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!

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

Leverage the capabilities of SAS to process and analyze Big Data About This Book Combine SAS with platforms such as Hadoop, SAP HANA, and Cloud Foundry-based platforms for efficient Big Data analytics Learn how to use the web browser-based SAS Studio and iPython Jupyter Notebook interfaces with SAS Practical, real-world examples on predictive modeling, forecasting, optimizing and reporting your Big Data analysis with SAS Who This Book Is For SAS professionals and data analysts who wish to perform analytics on Big Data using SAS to gain actionable insights will find this book to be very useful. If you are a data science professional looking to perform large-scale analytics with SAS, this book will also help you. A basic understanding of SAS will be helpful, but is not mandatory. What You Will Learn Configure a free version of SAS in order do hands-on exercises dealing with data management, analysis, and reporting. Understand the basic concepts of the SAS language which consists of the data step (for data preparation) and procedures (or PROCs) for analysis. Make use of the web browser based SAS Studio and iPython Jupyter Notebook interfaces for coding in the SAS, DS2, and FedSQL programming languages. Understand how the DS2 programming language plays an important role in Big Data preparation and analysis using SAS Integrate and work efficiently with Big Data platforms like Hadoop, SAP HANA, and cloud foundry based systems. In Detail SAS has been recognized by Money Magazine and Payscale as one of the top business skills to learn in order to advance one's career. Through innovative data management, analytics, and business intelligence software and services, SAS helps customers solve their business problems by allowing them to make better decisions faster. This book introduces the reader to the SAS and how they can use SAS to perform efficient analysis on any size data, including Big Data. The reader will learn how to prepare data for analysis, perform predictive, forecasting, and optimization analysis and then deploy or report on the results of these analyses. While performing the coding examples within this book the reader will learn how to use the web browser based SAS Studio and iPython Jupyter Notebook interfaces for working with SAS. Finally, the reader will learn how SAS's architecture is engineered and designed to scale up and/or out and be combined with the open source offerings such as Hadoop, Python, and R. By the end of this book, you will be able to clearly understand how you can efficiently analyze Big Data

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using SAS. Style and approach The book starts off by introducing the reader to SAS and the SAS programming language which provides data management, analytical, and reporting capabilities. Most chapters include hands on examples which highlights how SAS provides The Power to Know©. The reader will learn that if they are looking to perform large-scale data analysis that SAS provides an open platform engineered and designed to scale both up and out which allows the power of SAS to combine with open source offerings such as Hadoop, Python, and R.

As today's organizations are capturing exponentially larger amounts of data than ever, now is the time for organizations to rethink how they digest that data. Through advanced algorithms and analytics techniques, organizations can harness this data, discover hidden patterns, and use the newly acquired knowledge to achieve competitive advantages. Presenting the contributions of leading experts in their respective fields, *Big Data: Algorithms, Analytics, and Applications* bridges the gap between the vastness of Big Data and the appropriate computational methods for scientific and social discovery. It covers fundamental issues about Big Data, including efficient algorithmic methods to process data, better analytical strategies to digest data, and representative applications in diverse fields, such as medicine, science, and engineering. The book is organized into five main sections: Big Data Management—considers the research issues related to the management of Big Data, including indexing and scalability aspects Big Data Processing—addresses the problem of processing Big Data across a wide range of resource-intensive computational settings Big Data Stream Techniques and Algorithms—explores research issues regarding the management and mining of Big Data in streaming environments Big Data Privacy—focuses on models, techniques, and algorithms for preserving Big Data privacy Big Data Applications—illustrates practical applications of Big Data across several domains, including finance, multimedia tools, biometrics, and satellite Big Data processing Overall, the book reports on state-of-the-art studies and achievements in algorithms, analytics, and applications of Big Data. It provides readers with the basis for further efforts in this challenging scientific field that will play a leading role in next-generation database, data warehousing, data mining, and cloud computing research. It also explores related applications in diverse sectors, covering technologies for media/data communication, elastic media/data storage, cross-network media/data fusion, and SaaS. Unique prospective on the big data analytics phenomenon for both business and IT professionals The availability of Big Data, low-cost commodity hardware and new information management and analytics software has produced a unique moment in the history of business. The convergence of these trends means that we have the capabilities required to analyze astonishing data sets quickly and cost-effectively for the first time in history. These capabilities are neither theoretical nor trivial. They represent a genuine leap forward and a clear opportunity to realize enormous gains in terms of efficiency, productivity, revenue and profitability. The Age of Big Data is here, and these are truly revolutionary times. This timely book looks at cutting-edge companies supporting an exciting new generation of business analytics. Learn more about the trends in big data and how they are impacting the business world (Risk, Marketing, Healthcare, Financial Services, etc.) Explains this new technology and how companies can use them effectively to gather the data that they need and glean critical insights Explores relevant topics such as data privacy, data visualization, unstructured data, crowd sourcing data scientists, cloud computing for big data, and much more.

The main purpose of this book is to investigate, explore and describe approaches and methods to facilitate data understanding through analytics solutions based on its principles, concepts and applications. But analyzing data is also about involving the use of software. For this, and in order to cover some aspect of data analytics, this book uses software (Excel, SPSS, Python, etc) which can help readers to better understand the analytics process in simple terms and supporting useful methods in its application.

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Business Intelligence Strategy and Big Data Analytics is written for business leaders, managers, and analysts - people who are involved with advancing the use of BI at their companies or who need to better understand what BI is and how it can be used to improve profitability. It is written from a general management perspective, and it draws on observations at 12 companies whose annual revenues range between \$500 million and \$20 billion. Over the past 15 years, my company has formulated vendor-neutral business-focused BI strategies and program execution plans in collaboration with manufacturers, distributors, retailers, logistics companies, insurers, investment companies, credit unions, and utilities, among others. It is through these experiences that we have validated business-driven BI strategy formulation methods and identified common enterprise BI program execution challenges. In recent years, terms like “big data” and “big data analytics” have been introduced into the business and technical lexicon. Upon close examination, the newer terminology is about the same thing that BI has always been about: analyzing the vast amounts of data that companies generate and/or purchase in the course of business as a means of improving profitability and competitiveness. Accordingly, we will use the terms BI and business intelligence throughout the book, and we will discuss the newer concepts like big data as appropriate. More broadly, the goal of this book is to share methods and observations that will help companies achieve BI success and thereby increase revenues, reduce costs, or both. Provides ideas for improving the business performance of one’s company or business functions Emphasizes proven, practical, step-by-step methods that readers can readily apply in their companies Includes exercises and case studies with road-tested advice about formulating BI strategies and program plans

The guide to targeting and leveraging business opportunities using big data & analytics By leveraging big data & analytics, businesses create the potential to better understand, manage, and strategically exploiting the complex dynamics of customer behavior. Analytics in a Big Data World reveals how to tap into the powerful tool of data analytics to create a strategic advantage and identify new business opportunities.

Designed to be an accessible resource, this essential book does not include exhaustive coverage of all analytical techniques, instead focusing on analytics techniques that really provide added value in business environments. The book draws on author Bart Baesens' expertise on the topics of big data, analytics and its applications in e.g. credit risk, marketing, and fraud to provide a clear roadmap for organizations that want to use data analytics to their advantage, but need a good starting point. Baesens has conducted extensive research on big data, analytics, customer relationship management, web analytics, fraud detection, and credit risk management, and uses this experience to bring clarity to a complex topic. Includes numerous case studies on risk management, fraud detection, customer relationship management, and web analytics Offers the results of research and the author's personal experience in banking, retail, and government Contains an overview of the visionary ideas and current developments on the strategic use of analytics for business Covers the topic of data analytics in easy-to-understand terms without an undo emphasis on mathematics and the minutiae of statistical analysis For organizations looking to enhance their capabilities via data analytics, this resource is the go-to reference for leveraging data to enhance business capabilities.

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

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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.

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 will assist managers in providing an overview of the drivers for introducing big data technology into the organization and for understanding the types of business problems best suited to big data analytics solutions, understanding the value drivers and benefits, strategic planning, developing a pilot, and eventually planning to integrate back into production within the enterprise. Guides the reader in assessing the opportunities and value proposition Overview of big data hardware and software architectures Presents a variety of technologies and how they fit into the big data ecosystem

While the term Big Data is open to varying interpretation, it is quite clear that the Volume, Velocity, and Variety (3Vs) of data have impacted every aspect of computational science and its applications. The volume of data is increasing at a phenomenal rate and a majority of it is unstructured. With big data, the volume is so large that processing it using traditional database and software techniques is difficult, if not impossible. The drivers are the ubiquitous sensors, devices, social networks and the all-pervasive web. Scientists are increasingly looking to derive insights from the massive quantity of data to create new knowledge. In common usage, Big Data has come to refer simply to the use of predictive analytics or other certain advanced methods to extract value from data, without any required magnitude thereon. Challenges include analysis, capture, curation, search, sharing, storage, transfer, visualization, and information privacy. While there are challenges, there are huge opportunities emerging in the fields of Machine Learning, Data Mining, Statistics, Human-Computer Interfaces and Distributed Systems to address ways to analyze and reason with this data. The edited volume focuses on the challenges and opportunities posed by "Big Data" in a variety of domains and how statistical techniques and innovative algorithms can help glean insights and accelerate discovery. Big data has the potential to help companies improve operations and make faster, more intelligent decisions. Review of big data research challenges from diverse areas of scientific endeavor Rich perspective on a range of data science issues from leading researchers Insight into the mathematical and statistical theory underlying the computational methods used to address big data analytics problems in a variety of domains

Get command of your organizational Big Data using the power of data science and analytics Key Features A perfect companion to boost your Big Data storing, processing, analyzing skills to help you take informed business decisions Work with the best tools such as Apache Hadoop, R, Python, and Spark for NoSQL platforms to perform massive online analyses Get expert tips on statistical inference, machine learning, mathematical modeling, and data visualization for Big Data Book Description Big Data analytics relates to the strategies used by organizations to collect, organize and analyze large amounts of data to uncover valuable business insights that otherwise cannot be analyzed through traditional systems. Crafting an enterprise-scale cost-efficient Big Data and machine learning solution to uncover insights and value from your organization's data is a challenge. Today, with hundreds of new Big Data systems, machine learning packages and BI Tools, selecting the right combination of technologies is an even greater challenge. This book will help you do that. With the help of this guide, you

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will be able to bridge the gap between the theoretical world of technology with the practical ground reality of building corporate Big Data and data science platforms. You will get hands-on exposure to Hadoop and Spark, build machine learning dashboards using R and R Shiny, create web-based apps using NoSQL databases such as MongoDB and even learn how to write R code for neural networks. By the end of the book, you will have a very clear and concrete understanding of what Big Data analytics means, how it drives revenues for organizations, and how you can develop your own Big Data analytics solution using different tools and methods articulated in this book. What you will learn - Get a 360-degree view into the world of Big Data, data science and machine learning - Broad range of technical and business Big Data analytics topics that caters to the interests of the technical experts as well as corporate IT executives - Get hands-on experience with industry-standard Big Data and machine learning tools such as Hadoop, Spark, MongoDB, KDB+ and R - Create production-grade machine learning BI Dashboards using R and R Shiny with step-by-step instructions - Learn how to combine open-source Big Data, machine learning and BI Tools to create low-cost business analytics applications - Understand corporate strategies for successful Big Data and data science projects - Go beyond general-purpose analytics to develop cutting-edge Big Data applications using emerging technologies Who this book is for The book is intended for existing and aspiring Big Data professionals who wish to become the go-to person in their organization when it comes to Big Data architecture, analytics, and governance. While no prior knowledge of Big Data or related technologies is assumed, it will be helpful to have some programming experience.

This book has a collection of articles written by Big Data experts to describe some of the cutting-edge methods and applications from their respective areas of interest, and provides the reader with a detailed overview of the field of Big Data Analytics as it is practiced today. The chapters cover technical aspects of key areas that generate and use Big Data such as management and finance; medicine and healthcare; genome, cytome and microbiome; graphs and networks; Internet of Things; Big Data standards; bench-marking of systems; and others. In addition to different applications, key algorithmic approaches such as graph partitioning, clustering and finite mixture modelling of high-dimensional data are also covered. The varied collection of themes in this volume introduces the reader to the richness of the emerging field of Big Data Analytics.

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.

The proposed book will discuss various aspects of big data Analytics. It will deliberate upon the tools, technology, applications, use cases and research directions in the field. Chapters would be contributed by researchers, scientist and practitioners from various reputed universities and organizations for the benefit of readers.

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"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 make the significance of big data can be observed in any decision-making process as it is often used for forecasting and predictive analytics. Additionally, big data can be used to build a holistic view of an enterprise through a collection and analysis of large data sets retrospectively. As the data deluge deepens, new methods for analyzing, comprehending, and making use of big data become necessary. Enterprise Big Data Engineering, Analytics, and Management presents novel methodologies and practical approaches to engineering, managing, and analyzing large-scale data sets with a focus on enterprise applications and implementation. Featuring essential big data concepts including data mining, artificial intelligence, and information extraction, this publication provides a platform for retargeting the current research available in the field. Data analysts, IT professionals, researchers, and graduate-level students will find the timely research presented in this publication essential to furthering their knowledge in the field.

Big Data Analytics with Spark is a step-by-step guide for learning Spark, which is an open-source fast and general-purpose cluster computing framework for large-scale data analysis. You will learn how to use Spark for different types of big data analytics projects, including batch, interactive, graph, and stream data analysis as well as machine learning. In addition, this book will help you become a much sought-after Spark expert. Spark is one of the hottest Big Data technologies. The amount of data generated today by devices, applications and users is exploding. Therefore, there is a critical need for tools that can analyze large-scale data and unlock value from it. Spark is a powerful technology that meets that need. You can, for example, use Spark to perform low latency computations through the use of efficient caching and iterative algorithms; leverage the features of its shell for easy and interactive Data analysis; employ its fast batch processing and low latency features to process your real time data streams and so on. As a result, adoption of Spark is rapidly growing and is replacing Hadoop MapReduce as the technology of choice for big data analytics. This book provides an introduction to Spark and related big-data technologies. It covers Spark core and its add-on libraries, including Spark SQL, Spark Streaming, GraphX, and MLlib. Big Data Analytics with Spark is therefore written for busy professionals who prefer learning a new technology from a consolidated source instead of spending countless hours on the Internet trying to pick bits and pieces from different sources. The book also provides a chapter on Scala, the hottest functional programming language, and the program that underlies Spark. You'll learn the basics of functional programming in Scala, so that you can write Spark applications in it. What's more, Big Data Analytics with Spark provides an introduction to other big data technologies that are commonly used along with Spark, like Hive, Avro, Kafka and so on. So the book is self-sufficient; all the technologies that you need to know to use Spark are covered. The only thing that you are expected to know is programming in any language. There is a critical shortage of people with big data expertise, so companies are willing to pay top dollar for people with skills in areas like Spark and Scala. So reading this book and absorbing its principles will provide a boost—possibly a big boost—to

your career.

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.

Big data is presenting challenges to cybersecurity. For an example, the Internet of Things (IoT) will reportedly soon generate a staggering 400 zettabytes (ZB) of data a year. Self-driving cars are predicted to churn out 4000 GB of data per hour of driving. Big data analytics, as an emerging analytical technology, offers the capability to collect, store, process, and visualize these vast amounts of data. Big Data Analytics in Cybersecurity examines security challenges surrounding big data and provides actionable insights that can be used to improve the current practices of network operators and administrators. Applying big data analytics in cybersecurity is critical. By exploiting data from the networks and computers, analysts can discover useful network information from data. Decision makers can make more informative decisions by using this analysis, including what actions need to be performed, and improvement recommendations to policies, guidelines, procedures, tools, and other aspects of the network processes. Bringing together experts from academia, government laboratories, and industry, the book provides insight to both new and more experienced security professionals, as well as data analytics professionals who have varying levels of cybersecurity expertise. It covers a wide range of topics in cybersecurity, which include: Network forensics Threat analysis Vulnerability assessment Visualization Cyber training. In addition, emerging security domains such as the IoT, cloud computing, fog computing, mobile computing, and cyber-social networks are examined. The book first focuses on how big data analytics can be used in different aspects of cybersecurity including network forensics, root-cause analysis, and security training. Next it discusses big data challenges and solutions in such emerging cybersecurity domains as fog computing, IoT, and mobile app security. The book concludes by presenting the tools and datasets for future cybersecurity research.

In a world of soaring digitization, social media, financial transactions, and production and logistics processes constantly produce massive data. Employing analytical tools to extract insights and foresights from data improves the quality, speed, and reliability of solutions to highly intertwined issues faced in supply chain operations. From procurement in Industry 4.0 to sustainable consumption behavior to curriculum development for data scientists, this book offers a wide array of techniques and theories of Big Data Analytics applied to Supply Chain Management. It offers a comprehensive overview and forms a new synthesis by bringing together seemingly divergent fields of research. Intended for Engineering and Business students, scholars, and professionals, this book is a collection of state-of-the-art research and best practices to spur discussion about and extend the cumulant knowledge of

emerging supply chain problems.

Data Science and Big Data Analytics Discovering, Analyzing, Visualizing and Presenting Data John Wiley & Sons

With this book, managers and decision makers are given the tools to make more informed decisions about big data purchasing initiatives. Big Data Analytics: A Practical Guide for Managers not only supplies descriptions of common tools, but also surveys the various products and vendors that supply the big data market. Comparing and contrasting the dif 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.

As technology evolves and electronic data becomes more complex, digital medical record management and analysis becomes a challenge. In order to discover patterns and make relevant predictions based on large data sets, researchers and medical professionals must find new methods to analyze and extract relevant health information. Big Data Analytics in Bioinformatics and Healthcare merges the fields of biology, technology, and medicine in order to present a comprehensive study on the emerging information processing applications necessary in the field of electronic medical record management. Complete with interdisciplinary research resources, this publication is an essential reference source for researchers, practitioners, and students interested in the fields of biological computation, database management, and health information technology, with a special focus on the methodologies and tools to manage massive and complex electronic information.

The proposed book talks about the participation of human in Big Data. How human as a component of system can help in making the decision process easier and vibrant. It studies the basic build structure for big data and also includes advanced research topics. In the field of Biological sciences, it comprises genomic and proteomic data also. The book swaps traditional data management techniques with more robust and vibrant methodologies that focus on current requirement and demand through human computer interfacing in order to cope up with present business demand. Overall, the book is divided in to five parts where each part contains 4-5 chapters on versatile domain with human side of Big Data.

The availability of big data, low-cost commodity hardware, and new information management and analytic software have produced a unique moment in the history of data analysis. The convergence of these trends means that we have the capabilities required to analyze astonishing data sets quickly and cost-effectively for the first time in history. They represent a genuine leap forward and a clear opportunity to realize enormous gains in terms of efficiency, productivity, revenue, and profitability especially in digital marketing. Data plays a huge role in understanding valuable insights about target demographics and customer preferences. From every interaction with technology, regardless of whether it is active

or passive, we are creating new data that can describe us. If analyzed correctly, these data points can explain a lot about our behavior, personalities, and life events. Companies can leverage these insights for product improvements, business strategy, and marketing campaigns to cater to the target customers. *Big Data Analytics for Improved Accuracy, Efficiency, and Decision Making in Digital Marketing* aids understanding of big data in terms of digital marketing for meaningful analysis of information that can improve marketing efforts and strategies using the latest digital techniques. The chapters cover a wide array of essential marketing topics and techniques, including search engine marketing, consumer behavior, social media marketing, online advertising, and how they interact with big data. This book is essential for professionals and researchers working in the field of analytics, data, and digital marketing, along with marketers, advertisers, brand managers, social media specialists, managers, sales professionals, practitioners, researchers, academicians, and students looking for the latest information on how big data is being used in digital marketing strategies.

Apply predictive analytics throughout all stages of workforce management *People Analytics in the Era of Big Data* provides a blueprint for leveraging your talent pool through the use of data analytics. Written by the Global Vice President of Business Intelligence and Predictive Analytics at Monster Worldwide, this book is packed full of actionable insights to help you source, recruit, acquire, engage, retain, promote, and manage the exceptional talent your organization needs. With a unique approach that applies analytics to every stage of the hiring process and the entire workforce planning and management cycle, this informative guide provides the key perspective that brings analytics into HR in a truly useful way. You're already inundated with disparate employee data, so why not mine that data for insights that add value to your organization and strengthen your workforce? This book presents a practical framework for real-world talent analytics, backed by groundbreaking examples of workforce analytics in action across the U.S., Canada, Europe, Asia, and Australia. Leverage predictive analytics throughout the hiring process Utilize analytics techniques for more effective workforce management Learn how people analytics benefits organizations of all sizes in various industries Integrate analytics into HR practices seamlessly and thoroughly Corporate executives need fact-based insights into what will happen with their talent. Who should you hire? Who should you promote? Who are the top or bottom performers, and why? Who is at risk to quit, and why? Analytics can provide these answers, and give you insights based on quantifiable data instead of gut feeling and subjective assessment. *People Analytics in the Era of Big Data* is the essential guide to optimizing your workforce with the tools already at your disposal.

There is an ongoing data explosion transpiring that will make previous creations, collections, and storage of data look trivial. *Big Data, Mining, and Analytics: Components of Strategic Decision Making* ties together big data, data mining, and

analytics to explain how readers can leverage them to extract valuable insights from their data. Facilitati
Big data, analytics, and artificial intelligence are revolutionizing work, management, and lifestyles and are becoming disruptive technologies for healthcare, e-commerce, and web services. However, many fundamental, technological, and managerial issues for developing and applying intelligent big data analytics in these fields have yet to be addressed. Managerial Perspectives on Intelligent Big Data Analytics is a collection of innovative research that discusses the integration and application of artificial intelligence, business intelligence, digital transformation, and intelligent big data analytics from a perspective of computing, service, and management. While highlighting topics including e-commerce, machine learning, and fuzzy logic, this book is ideally designed for students, government officials, data scientists, managers, consultants, analysts, IT specialists, academicians, researchers, and industry professionals in fields that include big data, artificial intelligence, computing, and commerce.

Unique insights to implement big data analytics and reap big returns to your bottom line Focusing on the business and financial value of big data analytics, respected technology journalist Frank J. Ohlhorst shares his insights on the newly emerging field of big data analytics in Big Data Analytics. This breakthrough book demonstrates the importance of analytics, defines the processes, highlights the tangible and intangible values and discusses how you can turn a business liability into actionable material that can be used to redefine markets, improve profits and identify new business opportunities. Reveals big data analytics as the next wave for businesses looking for competitive advantage Takes an in-depth look at the financial value of big data analytics Offers tools and best practices for working with big data Once the domain of large on-line retailers such as eBay and Amazon, big data is now accessible by businesses of all sizes and across industries. From how to mine the data your company collects, to the data that is available on the outside, Big Data Analytics shows how you can leverage big data into a key component in your business's growth strategy.

"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 make sense of this data and information in a timely and effective way. That's where analytics come into play. Research shows that organizations that use business analytics to guide their decision making are more productive and experience higher returns on equity. Big Data and Business Analytics helps you quickly grasp the trends and techniques of big data and business analytics to make your organization more competitive. Packed with case studies, this book assembles insights from some of the leading experts and organizations worldwide. Spanning industry, government, not-for-profit organizations, and academia, they share valuable perspectives on big data domains such as cybersecurity, marketing,

emergency management, healthcare, finance, and transportation. Understand the trends, potential, and challenges associated with big data and business analytics Get an overview of machine learning, advanced statistical techniques, and other predictive analytics that can help you solve big data issues Learn from VPs of Big Data/Insights & Analytics via case studies of Fortune 100 companies, government agencies, universities, and not-for-profits Big data problems are complex. This book shows you how to go from being data-rich to insight-rich, improving your decision making and creating competitive advantage. Author Jay Liebowitz recently had an article published in The World Financial Review. www.worldfinancialreview.com/?p=1904

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 introduced 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.

A handy reference guide for data analysts and data scientists to help to obtain value from big data analytics using Spark on Hadoop clusters

About This Book This book is based on the latest 2.0 version of Apache Spark and 2.7 version of Hadoop integrated with most commonly used tools. Learn all Spark stack components including latest topics such as DataFrames, DataSets, GraphFrames, Structured Streaming, DataFrame based ML Pipelines and SparkR. Integrations with frameworks such as HDFS, YARN and tools such as Jupyter, Zeppelin, NiFi, Mahout, HBase Spark Connector, GraphFrames, H2O and Hivemall. Who This Book Is For Though this book is primarily aimed at data analysts and data scientists, it will also help architects, programmers, and practitioners. Knowledge of either Spark or Hadoop would be beneficial. It is assumed that you have basic programming background in Scala, Python, SQL, or R programming with basic Linux experience. Working experience within big data environments is not mandatory. What You Will Learn Find out and implement the tools and techniques of big data analytics using Spark on Hadoop clusters with wide variety of tools used with Spark and Hadoop Understand all the Hadoop and Spark ecosystem components Get to know all the Spark components: Spark Core, Spark SQL, DataFrames, DataSets, Conventional and Structured Streaming, MLLib, ML Pipelines and Graphx See batch and real-time data analytics using Spark Core, Spark SQL, and Conventional and Structured Streaming Get to grips with data science and machine learning using MLLib, ML Pipelines, H2O, Hivemall, Graphx, SparkR and Hivemall. In Detail Big Data Analytics book aims at providing the fundamentals of Apache Spark and Hadoop. All Spark components – Spark Core, Spark SQL, DataFrames, Data sets, Conventional Streaming, Structured Streaming, MLLib, Graphx and Hadoop core components – HDFS, MapReduce and Yarn are explored in greater depth with implementation examples on Spark + Hadoop clusters. It is moving away from MapReduce to Spark. So, advantages of Spark over MapReduce are explained at great depth to reap benefits of in-memory speeds. DataFrames API, Data Sources API and new Data set API are explained for building Big Data analytical applications. Real-time data analytics using Spark Streaming with Apache Kafka and HBase is covered to help building streaming applications. New Structured streaming concept is explained with an IOT (Internet of Things) use case. Machine learning techniques are covered using MLLib, ML Pipelines and SparkR and Graph Analytics are covered with GraphX and GraphFrames components of Spark. Readers will also get an opportunity to get started with web based notebooks such as Jupyter, Apache Zeppelin and data flow tool Apache NiFi to analyze and visualize data. Style and approach This step-by-step pragmatic guide will make life easy no matter what your level of experience. You will deep dive into Apache Spark on Hadoop clusters through ample exciting real-life examples. Practical tutorial explains data science in simple

Access Free Analytics In A Big Data World The Essential Guide To Data Science And Its Applications Wiley And Sas Business Series

terms to help programmers and data analysts get started with Data Science

Our newly digital world is generating an almost unimaginable amount of data about all of us. Such a vast amount of data is useless without plans and strategies that are designed to cope with its size and complexity, and which enable organisations to leverage the information to create value. This book is a refreshingly practical, yet theoretically sound roadmap to leveraging big data and analytics. *Creating Value with Big Data Analytics* provides a nuanced view of big data development, arguing that big data in itself is not a revolution but an evolution of the increasing availability of data that has been observed in recent times. Building on the authors' extensive academic and practical knowledge, this book aims to provide managers and analysts with strategic directions and practical analytical solutions on how to create value from existing and new big data. By tying data and analytics to specific goals and processes for implementation, this is a much-needed book that will be essential reading for students and specialists of data analytics, marketing research, and customer relationship management.

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