big data analytics vs business intelligence

big data analytics vs business intelligence represents two critical approaches in the field of data management and decision-making processes within organizations. These terms are often used interchangeably but encompass distinct methodologies, tools, and outcomes. Understanding the differences and relationships between big data analytics and business intelligence is essential for companies aiming to leverage data for competitive advantage. This article explores the fundamental concepts, key features, and practical applications of both fields. It also highlights how big data analytics and business intelligence complement each other in driving data-driven strategies. Following this introduction, a detailed examination of the core components and differences will provide a comprehensive overview for professionals and decision-makers.

Understanding Big Data Analytics

Big data analytics involves examining large and complex data sets that traditional data processing software cannot handle effectively. It focuses on uncovering hidden patterns, correlations, market trends, and other valuable insights by analyzing structured, semi-structured, and unstructured data from diverse sources. The primary goal of big data analytics is to enable organizations to make data-driven decisions by predicting future trends and behaviors.

Core Components of Big Data Analytics

The core components include data collection, data storage, data processing, and advanced analytical techniques such as machine learning, predictive modeling, and statistical analysis. Technologies like Hadoop, Spark, and NoSQL databases play a significant role in managing and processing big data efficiently.

Types of Big Data Analytics

Big data analytics can be categorized into four main types:

- **Descriptive Analytics:** Focuses on summarizing historical data to understand what has happened.

- **Diagnostic Analytics:** Examines data to determine why something occurred.
- **Predictive Analytics:** Uses statistical models and forecasts to predict future outcomes.
- **Prescriptive Analytics:** Provides recommendations on possible actions based on predictive insights.

Exploring Business Intelligence

Business intelligence (BI) refers to the strategies, technologies, and tools used to collect, integrate, analyze, and present business information. BI systems provide historical, current, and predictive views of business operations, primarily focusing on structured data from internal databases. The objective of business intelligence is to support better business decision-making through reporting, dashboards, and data visualization.

Key Features of Business Intelligence

BI tools typically include data warehousing, online analytical processing (OLAP), querying, and reporting. These features help organizations monitor performance, identify inefficiencies, and gain insights into operational processes.

Business Intelligence Process

The BI process usually follows these steps:

1. Data Extraction: Collecting data from various internal sources.
2. Data Transformation: Cleaning and organizing data into a consistent format.
3. Data Loading: Storing data in a data warehouse or data mart.
4. Data Analysis: Using analytical tools to interpret data.
5. Reporting and Visualization: Presenting data insights through dashboards and reports.

Key Differences Between Big Data Analytics and Business Intelligence

While big data analytics and business intelligence overlap in their focus on data-driven decision-making, they differ significantly in scope, data types, processing methods, and objectives.

Data Volume and Variety

Big data analytics deals with vast volumes of diverse data types, including unstructured data such as social media posts, sensor data, and multimedia content. In contrast, business intelligence primarily focuses on structured data collected from internal databases and transactional systems.

Analytical Techniques and Tools

Big data analytics employs advanced algorithms, machine learning, and artificial intelligence to uncover complex patterns and predictions. Business intelligence relies more on traditional querying, reporting, and visualization tools to analyze historical data and generate insights.

Purpose and Outcome

The primary purpose of big data analytics is to predict future trends and prescribe actions, supporting strategic initiatives and innovation. Business intelligence centers on monitoring current and past performance to improve operational efficiency and tactical decision-making.

Processing Speed and Complexity

Big data analytics requires high-speed processing capabilities to handle real-time or near-real-time data analysis. Business intelligence systems generally operate on batch processing with scheduled updates and periodic reporting.

Applications and Use Cases

Both big data analytics and business intelligence have distinct applications across various industries, often complementing each other to enhance business outcomes.

Big Data Analytics Applications

- **Healthcare:** Predictive analytics for patient outcomes and personalized treatment plans.
- **Retail:** Customer behavior analysis and inventory optimization.
- **Finance:** Fraud detection and risk management using real-time data streams.
- **Manufacturing:** Predictive maintenance and supply chain optimization.

Business Intelligence Applications

- **Sales and Marketing:** Performance tracking and campaign analysis.
- **Human Resources:** Workforce analytics and employee performance monitoring.
- **Operations:** Monitoring key performance indicators (KPIs) and process improvements.
- **Customer Service:** Reporting on customer satisfaction and service metrics.

Integration and Future Trends

The convergence of big data analytics and business intelligence is becoming increasingly common as organizations seek comprehensive data solutions. Integrating these fields enables enterprises to leverage both historical insights and predictive analytics in a unified platform.

Technological Integration

Modern platforms combine BI dashboards with big data processing engines, allowing seamless access to real-time data and traditional reports. Cloud computing, artificial intelligence, and advanced data visualization tools facilitate this integration.

Emerging Trends

- **Augmented Analytics:** Using AI to enhance data preparation, insight generation, and explanation.
- **Data Democratization:** Empowering non-technical users with self-service analytics tools.
- **Edge Analytics:** Processing data closer to its source for faster insights.
- **Increased Focus on Data Governance:** Ensuring data quality, security, and compliance.

Frequently Asked Questions

What is the primary difference between big data analytics and business intelligence?

Big data analytics focuses on analyzing large volumes of diverse, complex data to uncover patterns

and insights, often using advanced techniques like machine learning. Business intelligence primarily deals with analyzing historical business data to support decision-making, typically through reporting and dashboards.

How do big data analytics and business intelligence complement each other?

Big data analytics can provide deeper, predictive insights by processing vast and varied datasets, while business intelligence offers structured reporting and visualization of historical data. Together, they enable organizations to make informed, data-driven decisions combining past performance with future trends.

Which tools are commonly used for big data analytics compared to business intelligence?

Big data analytics tools include Apache Hadoop, Spark, and advanced analytics platforms like SAS and Databricks. Business intelligence tools typically include Tableau, Power BI, and QlikView, which focus on data visualization and reporting.

Can business intelligence handle big data effectively?

Traditional business intelligence systems may struggle with the volume, velocity, and variety of big data. However, modern BI platforms are increasingly integrating big data technologies to manage and analyze large datasets more effectively.

What types of data do big data analytics and business intelligence typically process?

Big data analytics processes structured, semi-structured, and unstructured data from various sources such as social media, sensors, and log files. Business intelligence primarily deals with structured data from internal business systems like ERP, CRM, and databases.

Which approach is more suitable for predictive analytics: big data analytics or business intelligence?

Big data analytics is more suitable for predictive analytics because it uses advanced algorithms, machine learning, and real-time data processing to forecast trends and behaviors. Business intelligence generally focuses on descriptive analytics and reporting.

How do the goals of big data analytics differ from those of business intelligence?

The goal of big data analytics is to discover hidden patterns, correlations, and insights from massive and varied data sets to drive innovation and competitive advantage. Business intelligence aims to provide historical data insights and performance metrics to improve operational efficiency and support strategic decisions.

Is expertise required to use big data analytics compared to business intelligence?

Yes, big data analytics often requires specialized skills such as data science, programming, and statistical analysis due to the complexity of data and tools involved. Business intelligence tools are generally more user-friendly and designed for business users with less technical expertise.

How do big data analytics and business intelligence impact decision-making in organizations?

Big data analytics enables organizations to make proactive, forward-looking decisions by leveraging predictive and prescriptive insights. Business intelligence supports reactive decision-making by providing a clear understanding of past and current business performance through data visualization and reporting.

Additional Resources

1. *Big Data Analytics vs Business Intelligence: Understanding the Differences*
This book provides a clear comparison between big data analytics and traditional business intelligence, highlighting their unique methodologies, tools, and applications. It explains how organizations can leverage each approach to improve decision-making and gain competitive advantages. The author also discusses the evolving landscape of data technologies and their impact on business strategies.

2. *From BI to Big Data: Transforming Analytics in the Digital Age*
Focusing on the transition from business intelligence to big data analytics, this book explores how digital transformation is reshaping data practices in enterprises. It offers insights into integrating big data technologies with existing BI frameworks and the challenges involved in this integration. Readers will gain practical knowledge on enhancing data-driven decision processes.

3. *Business Intelligence and Big Data: Bridging the Gap*
This title delves into the complementary roles of business intelligence and big data analytics in modern organizations. It discusses how BI tools can be augmented with big data capabilities to provide deeper insights and predictive analytics. Case studies illustrate successful implementations across various industries.

4. *Big Data Analytics: The New Frontier Beyond Business Intelligence*
An exploration of the advanced analytics techniques that extend beyond traditional BI, this book covers machine learning, data mining, and real-time data processing. It emphasizes the strategic value of big data in uncovering hidden patterns and driving innovation. The author provides guidance on building analytics teams and infrastructure.

5. *Comparative Strategies in Business Intelligence and Big Data Analytics*
This book presents a strategic framework for choosing between BI and big data analytics based on organizational needs and goals. It highlights key factors such as data volume, velocity, variety, and the desired outcomes of analytics initiatives. The text is designed for managers and data professionals seeking to optimize their analytics investments.

6. *Integrating Big Data Analytics with Business Intelligence Systems*
Focusing on the technical and operational aspects, this book explains how to effectively combine big data analytics platforms with existing BI systems. It covers architecture design, data governance, and performance optimization. Readers will learn best practices for ensuring seamless data flow and actionable insights.

7. *Business Intelligence vs Big Data: Tools, Techniques, and Trends*
This comprehensive guide compares the tools and techniques used in BI and big data analytics, highlighting current industry trends. It includes evaluations of popular software solutions and discusses emerging technologies like AI and IoT analytics. The book is a valuable resource for IT professionals and business analysts.

8. *Data-Driven Decision Making: Leveraging Business Intelligence and Big Data Analytics*
This book emphasizes the practical application of both BI and big data analytics to support data-driven decision-making processes. It provides frameworks for aligning analytics initiatives with business objectives and measuring their impact. Real-world examples demonstrate how to maximize value from data assets.

9. *The Future of Analytics: Blending Business Intelligence with Big Data*
Looking ahead, this book explores the convergence of BI and big data analytics in shaping the future of enterprise analytics. It discusses advancements in cloud computing, AI integration, and self-service analytics tools. The author offers predictions and strategies to prepare organizations for the evolving data landscape.

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big data analytics vs business intelligence: Big Data, Big Analytics Michael Minelli, Michele Chambers, Ambiga Dhiraj, 2012-12-27 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.

big data analytics vs business intelligence: Business Intelligence Strategy and Big Data

Analytics Steve Williams, 2016-04-08 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

big data analytics vs business intelligence: Data Science Concepts and Techniques with Applications Usman Qamar, Muhammad Summair Raza, 2023-04-02 This textbook comprehensively covers both fundamental and advanced topics related to data science. Data science is an umbrella term that encompasses data analytics, data mining, machine learning, and several other related disciplines. The chapters of this book are organized into three parts: The first part (chapters 1 to 3) is a general introduction to data science. Starting from the basic concepts, the book will highlight the types of data, its use, its importance and issues that are normally faced in data analytics, followed by presentation of a wide range of applications and widely used techniques in data science. The second part, which has been updated and considerably extended compared to the first edition, is devoted to various techniques and tools applied in data science. Its chapters 4 to 10 detail data pre-processing, classification, clustering, text mining, deep learning, frequent pattern mining, and regression analysis. Eventually, the third part (chapters 11 and 12) present a brief introduction to Python and R, the two main data science programming languages, and shows in a completely new chapter practical data science in the WEKA (Waikato Environment for Knowledge Analysis), an open-source tool for performing different machine learning and data mining tasks. An appendix explaining the basic mathematical concepts of data science completes the book. This textbook is suitable for advanced undergraduate and graduate students as well as for industrial practitioners who carry out research in data science. They both will not only benefit from the comprehensive presentation of important topics, but also from the many application examples and the comprehensive list of further readings, which point to additional publications providing more in-depth research results or provide sources for a more detailed description of related topics. This book delivers a systematic, carefully thoughtful material on Data Science. from the Foreword by Witold Pedrycz, U Alberta, Canada.

big data analytics vs business intelligence: Data Analytics for Business Intelligence Zhaohao Sun, 2024-12-30 This book studies data, analytics, and intelligence using Boolean structure. Chapters dive into the theories, foundations, technologies, and methods of data, analytics, and intelligence. The primary aim of this book is to convey the theories and technologies of data, analytics, and intelligence with applications to readers based on systematic generalization and specialization. Sun uses the Boolean structure to deconstruct all books and papers related to data, analytics, and intelligence and to reorganize them to reshape the world of big data, data analytics,

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big data analytics vs business intelligence: Big Data Applications in Industry 4.0 P. Kaliraj, T. Devi, 2022-02-09 Industry 4.0 is the latest technological innovation in manufacturing with the goal to increase productivity in a flexible and efficient manner. Changing the way in which manufacturers operate, this revolutionary transformation is powered by various technology advances including Big Data analytics, Internet of Things (IoT), Artificial Intelligence (AI), and cloud computing. Big Data analytics has been identified as one of the significant components of Industry 4.0, as it provides valuable insights for smart factory management. Big Data and Industry 4.0 have the potential to reduce resource consumption and optimize processes, thereby playing a key role in achieving sustainable development. Big Data Applications in Industry 4.0 covers the recent advancements that have emerged in the field of Big Data and its applications. The book introduces the concepts and advanced tools and technologies for representing and processing Big Data. It also covers applications of Big Data in such domains as financial services, education, healthcare, biomedical research, logistics, and warehouse management. Researchers, students, scientists, engineers, and statisticians can turn to this book to learn about concepts, technologies, and applications that solve real-world problems. Features An introduction to data science and the types of data analytics methods accessible today An overview of data integration concepts, methodologies, and solutions A general framework of forecasting principles and applications, as well as basic forecasting models including naïve, moving average, and exponential smoothing models A detailed roadmap of the Big Data evolution and its related technological transformation in computing, along with a brief description of related terminologies The application of Industry 4.0 and Big Data in the field of education The features, prospects, and significant role of Big Data in the banking industry, as well as various use cases of Big Data in banking, finance services, and insurance Implementing a Data Lake (DL) in the cloud and the significance of a data lake in decision making

big data analytics vs business intelligence: Oracle Business Intelligence and Essbase Solutions Guide Rosendo Abellera, Lakshman Bulusu, 2016-11-30 This book highlights the practical aspects of using Oracle Essbase and Oracle Business Intelligence Enterprise Edition (OBIEE) as a comprehensive BI solution. It explains the key steps involved in Oracle Essbase and OBIEE implementations. Using case studies, the book covers Oracle Essbase for analytical BI and data integration, using OBIEE for operational BI including presentation services and BI Publisher for real-time reporting services, Self-service BI– in terms of VLDB, scalability, high performance, stability, long-lasting and ease of use that saves time, effort, and costs, while maximizing ROI.

big data analytics vs business intelligence: Research Anthology on Big Data Analytics, Architectures, and Applications Management Association, Information Resources, 2021-09-24 Society is now completely driven by data with many industries relying on data to conduct business or basic functions within the organization. With the efficiencies that big data bring to all institutions, data is continuously being collected and analyzed. However, data sets may be too complex for traditional data-processing, and therefore, different strategies must evolve to solve the issue. The field of big data works as a valuable tool for many different industries. The Research Anthology on Big Data Analytics, Architectures, and Applications is a complete reference source on big data analytics that offers the latest, innovative architectures and frameworks and explores a variety of applications within various industries. Offering an international perspective, the applications discussed within this anthology feature global representation. Covering topics such as advertising curricula, driven supply chain, and smart cities, this research anthology is ideal for data scientists,

data analysts, computer engineers, software engineers, technologists, government officials, managers, CEOs, professors, graduate students, researchers, and academicians.

big data analytics vs business intelligence: Business Intelligence Guidebook Rick Sherman, 2014-11-04 Between the high-level concepts of business intelligence and the nitty-gritty instructions for using vendors' tools lies the essential, yet poorly-understood layer of architecture, design and process. Without this knowledge, Big Data is belittled – projects flounder, are late and go over budget. Business Intelligence Guidebook: From Data Integration to Analytics shines a bright light on an often neglected topic, arming you with the knowledge you need to design rock-solid business intelligence and data integration processes. Practicing consultant and adjunct BI professor Rick Sherman takes the guesswork out of creating systems that are cost-effective, reusable and essential for transforming raw data into valuable information for business decision-makers. After reading this book, you will be able to design the overall architecture for functioning business intelligence systems with the supporting data warehousing and data-integration applications. You will have the information you need to get a project launched, developed, managed and delivered on time and on budget – turning the deluge of data into actionable information that fuels business knowledge. Finally, you'll give your career a boost by demonstrating an essential knowledge that puts corporate BI projects on a fast-track to success. - Provides practical guidelines for building successful BI, DW and data integration solutions. - Explains underlying BI, DW and data integration design, architecture and processes in clear, accessible language. - Includes the complete project development lifecycle that can be applied at large enterprises as well as at small to medium-sized businesses - Describes best practices and pragmatic approaches so readers can put them into action. - Companion website includes templates and examples, further discussion of key topics, instructor materials, and references to trusted industry sources.

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big data analytics vs business intelligence: Big Data and Analytics Dr. Jugnesh Kumar, Dr. Anubhav Kumar, Dr. Rinku Kumar, 2024-03-05 Unveiling insights, unleashing potential: Navigating the depths of big data and analytics for a data-driven tomorrow KEY FEATURES ● Learn about big data and how it helps businesses innovate, grow, and make decisions efficiently. ● Learn about data collection, storage, processing, and analysis, along with tools and methods. ● Discover real-life examples of big data applications across industries, addressing challenges like privacy and security. DESCRIPTION Big data and analytics is an indispensable guide that navigates the complex data management and analysis. This comprehensive book covers the core principles, processes, and tools, ensuring readers grasp the essentials and progress to advanced applications. It will help you

understand the different analysis types like descriptive, predictive, and prescriptive. Learn about NoSQL databases and their benefits over SQL. The book centers on Hadoop, explaining its features, versions, and main components like HDFS (storage) and MapReduce (processing). Explore MapReduce and YARN for efficient data processing. Gain insights into MongoDB and Hive, popular tools in the big data landscape. WHAT YOU WILL LEARN ● Grasp big data fundamentals and applications. ● Master descriptive, predictive, and prescriptive analytics. ● Understand HDFS, MapReduce, YARN, and their functionalities. ● Explore data storage, retrieval, and manipulation in a NoSQL database. ● Gain practical insights and apply them to real-world scenarios. WHO THIS BOOK IS FOR This book caters to a diverse audience, including data professionals, analysts, IT managers, and business intelligence practitioners. TABLE OF CONTENTS 1. Introduction to Big Data 2. Big Data Analytics 3. Introduction of NoSQL 4. Introduction to Hadoop 5. Map Reduce 6. Introduction to MongoDB

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big data analytics vs business intelligence: Business Analytics, Volume I Amar Sahay, 2018-08-23 Business Analytics: A Data-Driven Decision Making Approach for Business-Part I,/i> provides an overview of business analytics (BA), business intelligence (BI), and the role and importance of these in the modern business decision-making. The book discusses all these areas along with three main analytics categories: (1) descriptive, (2) predictive, and (3) prescriptive analytics with their tools and applications in business. This volume focuses on descriptive analytics that involves the use of descriptive and visual or graphical methods, numerical methods, as well as data analysis tools, big data applications, and the use of data dashboards to understand business performance. The highlights of this volume are: Business analytics at a glance; Business intelligence (BI), data analytics; Data, data types, descriptive analytics; Data visualization tools; Data visualization with big data; Descriptive analytics-numerical methods; Case analysis with computer applications.

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big data analytics vs business intelligence: Integration Challenges for Analytics, Business Intelligence, and Data Mining Azevedo, Ana, Santos, Manuel Filipe, 2020-12-11 As technology continues to advance, it is critical for businesses to implement systems that can support the transformation of data into information that is crucial for the success of the company. Without the integration of data (both structured and unstructured) mining in business intelligence systems, invaluable knowledge is lost. However, there are currently many different models and approaches that must be explored to determine the best method of integration. Integration Challenges for Analytics, Business Intelligence, and Data Mining is a relevant academic book that provides empirical research findings on increasing the understanding of using data mining in the context of business intelligence and analytics systems. Covering topics that include big data, artificial intelligence, and decision making, this book is an ideal reference source for professionals working in the areas of data mining, business intelligence, and analytics; data scientists; IT specialists; managers; researchers; academicians; practitioners; and graduate students.

big data analytics vs business intelligence: Proceedings of International Conference on Data Science and Applications Mukesh Saraswat, Chandreyee Chowdhury, Chintan Kumar Mandal, Amir H. Gandomi, 2023-02-16 This book gathers outstanding papers presented at the International Conference on Data Science and Applications (ICDSA 2022), organized by Soft Computing Research Society (SCRS) and Jadavpur University, Kolkata, India, from 26 to 27 March 2022. It covers theoretical and empirical developments in various areas of big data analytics, big data technologies, decision tree learning, wireless communication, wireless sensor networking, bioinformatics and systems, artificial neural networks, deep learning, genetic algorithms, data mining, fuzzy logic, optimization algorithms, image processing, computational intelligence in civil engineering, and creative computing.

big data analytics vs business intelligence: *Business Intelligence with Power BI and Tableau: Cloud-Based Data Warehousing, Predictive Analytics, and Artificial Intelligence-Driven Decision Support* Sibaram Prasad Panda, Anita Padhy, 2025-08-15 The Advanced Business Intelligence- Tools and Techniques for Data-Driven Decision Making provides a comprehensive discovery of the modern ecosystem for business intelligence, which detects the development from stable reports to dynamic, real -time analysis A dedicated comparison considers each tool on important dimensions, including matrix prices, integration skills, scalability and purpose, which allows informed decisions. The book concludes by detecting practical, sector -specific applications of BI, showing how industries to reveal insights into health services from finance, to increase efficiency and maintain a competitive management to industries. Whether for IT subjects, data analysts or business executives, this guide acts as a reference and a roadmap to navigate in diverse BI tools.

big data analytics vs business intelligence: Business Intelligence David Loshin, 2012-11-27 Business Intelligence: The Savvy Managers Guide, Second Edition, discusses the objectives and practices for designing and deploying a business intelligence (BI) program. It looks at the basics of a BI program, from the value of information and the mechanics of planning for success to data model infrastructure, data preparation, data analysis, integration, knowledge discovery, and the actual use of discovered knowledge. Organized into 21 chapters, this book begins with an overview of the kind of knowledge that can be exposed and exploited through the use of BI. It then proceeds with a discussion of information use in the context of how value is created within an organization, how BI can improve the ways of doing business, and organizational preparedness for exploiting the results of a BI program. It also looks at some of the critical factors to be taken into account in the planning and execution of a successful BI program. In addition, the reader is introduced to considerations for developing the BI roadmap, the platforms for analysis such as data warehouses, and the concepts of business metadata. Other chapters focus on data preparation and data discovery, the business rules approach, and data mining techniques and predictive analytics. Finally, emerging technologies such as text analytics and sentiment analysis are considered. This book will be valuable to data management and BI professionals, including senior and middle-level managers, Chief Information Officers and Chief Data Officers, senior business executives and business staff members, database or

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big data analytics vs business intelligence: Big Data Analytics for Healthcare Pantea Keikhosrokiani, 2022-05-19 Big Data Analytics and Medical Information Systems presents the valuable use of artificial intelligence and big data analytics in healthcare and medical sciences. It focuses on theories, methods and approaches in which data analytic techniques can be used to examine medical data to provide a meaningful pattern for classification, diagnosis, treatment, and prediction of diseases. The book discusses topics such as theories and concepts of the field, and how big medical data mining techniques and applications can be applied to classification, diagnosis, treatment, and prediction of diseases. In addition, it covers social, behavioral, and medical fake news analytics to prevent medical misinformation and myths. It is a valuable resource for graduate students, researchers and members of biomedical field who are interested in learning more about analytic tools to support their work. - Presents theories, methods and approaches in which data analytic techniques are used for medical data - Brings practical information on how to use big data for classification, diagnosis, treatment, and prediction of diseases - Discusses social, behavioral, and medical fake news analytics for medical information systems

big data analytics vs business intelligence: *Big Data Analytics* V. B. Aggarwal, Vasudha Bhatnagar, Durgesh Kumar Mishra, 2017-10-03 This volume comprises the select proceedings of the annual convention of the Computer Society of India. Divided into 10 topical volumes, the proceedings present papers on state-of-the-art research, surveys, and succinct reviews. The volumes cover diverse topics ranging from communications networks to big data analytics, and from system architecture to cyber security. This volume focuses on Big Data Analytics. The contents of this book will be useful to researchers and students alike.

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