

Data Governance Tools Evaluation Criteria Big Data Governance And Alignment With Enterprise Data Management

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Large Scale and Big Data Sherif Sakr 2014-06-25

Large Scale and Big Data: Processing and Management provides readers with a central source of reference on the data management techniques currently available for large-scale data processing. Presenting chapters written by leading researchers, academics, and practitioners, it addresses the fundamental challenges associated with Big Data processing tools and techniques across a range of computing environments. The book begins by discussing the basic concepts and tools of large-scale Big Data processing and cloud computing. It also provides an overview of different programming models and cloud-based deployment models. The book's second section examines the usage of advanced Big Data processing techniques in different domains, including semantic web, graph processing, and stream processing. The third section discusses advanced topics of Big Data processing such as consistency management, privacy, and security. Supplying a comprehensive summary from both the research and applied perspectives, the book covers recent research discoveries and applications, making it an ideal reference for a wide range of audiences, including researchers and academics working on databases, data mining, and web scale data processing. After reading this book, you will gain a fundamental understanding of how to use Big Data-processing tools and techniques effectively across application domains. Coverage includes cloud data management architectures, big data analytics visualization, data management, analytics for vast amounts of unstructured data, clustering, classification, link analysis of big data, scalable data mining, and machine learning techniques.

Open and Big Data Management and Innovation - Marijn Janssen 2015-10-08

This book constitutes the refereed conference proceedings of the 14th IFIP WG 6.11 Conference on e-Business, e-Services and e-Society, I3E 2015, held in Delft, The Netherlands, in October 2015. The 40 revised full papers presented together with 1 keynote panel were carefully reviewed and selected from 65 submissions. They are organized in the following topical sections: adoption; big and open data; e-business, e-services,, and e-society; and witness workshop.

DAMA-DMBOK - Dama International 2017

Defining a set of guiding principles for data management and describing how these principles can be applied within data management functional areas; Providing a functional framework for the implementation of enterprise data management practices; including widely adopted practices, methods and techniques, functions, roles, deliverables and metrics; Establishing a common vocabulary for data management concepts and serving as the basis for best practices for data management professionals. DAMA-DMBOK2 provides data management and IT professionals, executives, knowledge workers, educators, and researchers with a framework to manage their data and mature their information infrastructure, based on these principles: Data is an asset with unique properties; The value of data can be and should be expressed in economic terms; Managing data means managing the quality of data; It takes metadata to manage data; It takes planning to manage data; Data management is cross-functional and requires a range of skills and expertise; Data management requires an enterprise perspective; Data management must account for a range of perspectives; Data management is data lifecycle management; Different types of data have different lifecycle requirements; Managing data includes managing risks associated with data; Data management requirements must drive

information technology decisions; Effective data management requires leadership commitment.

The IBM Data Governance Unified Process - Sunil Soares 2010-10-01

Anyone considering a data governance program within their organisation will find an invaluable step-by-step methodology using IBM tools and best practices in this structured how-to. While many in the IT industry hold separate definitions in their minds, this authoritative manual defines data governance as the discipline of treating data as an enterprise asset. The intricate process of data governance involves the exercise of decision rights to optimise, secure, and leverage data. Providing a rigorous explanation of the 14 steps and almost 100 substeps to enact unified data governance, this extensive handbook also shows that the core issues to be tackled are not about technology but rather about people and process.

Non-Invasive Data Governance - Robert S. Seiner 2014-09-01

Data-governance programs focus on authority and accountability for the management of data as a valued organizational asset. Data Governance should not be about command-and-control, yet at times could become invasive or threatening to the work, people and culture of an organization. Non-Invasive Data Governance™ focuses on formalizing existing accountability for the management of data and improving formal communications, protection, and quality efforts through effective stewarding of data resources. Non-Invasive Data Governance will provide you with a complete set of tools to help you deliver a successful data governance program. Learn how: • Steward responsibilities can be identified and recognized, formalized, and engaged according to their existing responsibility rather than being assigned or handed to people as more work. • Governance of information can be applied to existing policies, standard operating procedures, practices, and methodologies, rather than being introduced or emphasized as new processes or methods. • Governance of information can support all data integration, risk management, business intelligence and master data management activities rather than imposing inconsistent rigor to these initiatives. • A practical and non-threatening approach can be applied to governing information and promoting stewardship of data as a cross-organization asset. • Best practices and key concepts of this non-threatening approach can be communicated effectively to leverage strengths and address opportunities to improve.

Big Data Governance and Perspectives in Knowledge Management

- Strydom, Sheryl Kruger 2018-11-16

The world is witnessing the growth of a global movement facilitated by technology and social media. Fueled by information, this movement contains enormous potential to create more accountable, efficient, responsive, and effective governments and businesses, as well as spurring economic growth. Big Data Governance and Perspectives in Knowledge Management is a collection of innovative research on the methods and applications of applying robust processes around data, and aligning organizations and skillsets around those processes. Highlighting a range of topics including data analytics, prediction analysis, and software development, this book is ideally designed for academicians, researchers, information science professionals, software developers, computer engineers, graduate-level computer science students, policymakers, and managers seeking current research on the convergence of big data and information governance as two major trends in information management.

Research and Development Management - Tugrul Daim 2017-05-23

This book introduces readers to essential technology assessment and forecasting tools, demonstrating their use on the basis of multiple cases. As organizations in the high-tech industry need to be able to assess emerging technologies, the book presents cases in which formal decision-making models are developed, providing a framework for decision-making in the context of technology acquisition and development. Applications of different technology forecasting tools are also discussed for a range of technologies and sectors, providing a guide to keep R&D organizations abreast of technological trends that affect their business. As such, the book offers a valuable theoretical and practical reference guide for R&D managers responsible for emerging and future technologies.

Big Data Management - Peter Ghavami 2020-11-09

Data analytics is core to business and decision making. The rapid increase in data volume, velocity and variety offers both opportunities and challenges. While open source solutions to store big data, like Hadoop, offer platforms for exploring value and insight from big data, they were not originally developed with data security and governance in mind. Big Data Management discusses numerous policies, strategies and recipes for managing big data. It addresses data security, privacy, controls and life cycle management offering modern principles and open source architectures for successful governance of big data. The author has collected best practices from the world's leading organizations that have successfully implemented big data platforms. The topics discussed cover the entire data management life cycle, data quality, data stewardship, regulatory considerations, data council, architectural and operational models are presented for successful management of big data. The book is a must-read for data scientists, data engineers and corporate leaders who are implementing big data platforms in their organizations.

Big Data Analytics for Intelligent Healthcare Management - Nijanj Dey 2019-04-15

Big Data Analytics for Intelligent Healthcare Management covers both the theory and application of hardware platforms and architectures, the development of software methods, techniques and tools, applications and governance, and adoption strategies for the use of big data in healthcare and clinical research. The book provides the latest research findings on the use of big data analytics with statistical and machine learning techniques that analyze huge amounts of real-time healthcare data. Examines the methodology and requirements for development of big data architecture, big data modeling, big data as a service, big data analytics, and more Discusses big data applications for intelligent healthcare management, such as revenue management and pricing, predictive analytics/forecasting, big data integration for medical data, algorithms and techniques, etc. Covers the development of big data tools, such as data, web and text mining, data mining, optimization, machine learning, cloud in big data with Hadoop, big data in IoT, and more

OECD Public Governance Reviews Open and Connected Government Review of Thailand - OECD 2022-02-18

This Open and Connected Government Review of Thailand, the first of its kind, assesses Thailand's efforts to build a government that is closer and more responsive to its citizens by using digitalisation, data and stakeholder participation to drive national development. In line with OECD good practices, the Recommendations of the Council on Digital Government Strategies (2014) and on Open Government (2017), and the OECD Digital Government Policy Framework, the review looks at institutional and legal governance, digital talent and skills, public service provision and the strategic use of technologies and data in the Thai government.

Proceedings of the International Conference on Business and Management Dynamics 2016: Sustainable economies in the information economy - Joy E. Akahome 2016-12-31

Cape Town, South Africa, 7 Sept. 2016 – 8 Sept. 2016. Theme: Sustainable economies in the information economy. Purpose: To share the quality academic papers presented at the International Conference on Business and Management Dynamics (ICBMD) held from 7 to 8 September 2016 at African Pride Crystal Hotel and Spa in Cape Town. As grey literature, the proceedings are the contributions made by researchers at the conference and are considered the written record of the work that was presented to fellow conference delegates.

Methodology: The methodology used varies from researcher to researcher but are suitable for the studies conducted. Thus, on the one hand, studies that were subjective in nature used the interpretive paradigm, where the qualitative approach adopted made use of the interview method to collect data. On the other hand, studies that were objectively inclined adopted the positivist philosophy and used survey

questionnaires to collect data. However, there were some academic papers which used mixed methodology because of the nature of the study. Whatever methodology used adhered to the ethos of the philosophies underpinning the methodology. Contribution made to scholarship: The articles come from individual researchers and each article in the proceedings is unique. Mostly, there is no general argument leading from one contribution to the next. However, it is interesting to note that in the area of economic performance it was evident that real exchange rate and net foreign direct investment contribute more towards innovations in economic growth. With regard to human capital development, papers presented evidence that there exists a definite need to explore the phenomenon of personal branding as limited scientific academic research has been done within the field of personal branding or on elements of the topic. Thus, the outcome argues that personal branding has an influence on leadership style which in turn impacts on organisational performance and related hygiene factors. Furthermore, it was demonstrated that current methods or strategies for enforcing institutionalisation of knowledge sharing within an organisation have not been successful, and, as such, new strategies are needed to reinforce efforts to nurture and invigorate the institutionalisation of knowledge sharing within an organisation. With regard to technology and big data impact on organisational performance, it was evident that system performance, memory consumption and CPU utilisation can be used as criteria to compare and evaluate big data technologies to improve organisational performance. Most of the articles' contribution reemphasised technology education and training as a means of digitising business and improving effectiveness. Target audience: The target readership is academic researchers and business leaders who require access to the latest developments in the fields of economics, information management, business, education, development studies, social sciences and technology. It is also for policymakers and other stakeholders who need a better understanding of the impact of new developments on existing policies and regulations for their review or amendment.

Master Data Management - David Loshin 2010-07-28

The key to a successful MDM initiative isn't technology or methods, it's people: the stakeholders in the organization and their complex ownership of the data that the initiative will affect. Master Data Management equips you with a deeply practical, business-focused way of thinking about MDM—an understanding that will greatly enhance your ability to communicate with stakeholders and win their support. Moreover, it will help you deserve their support: you'll master all the details involved in planning and executing an MDM project that leads to measurable improvements in business productivity and effectiveness. * Presents a comprehensive roadmap that you can adapt to any MDM project. * Emphasizes the critical goal of maintaining and improving data quality. * Provides guidelines for determining which data to "master. * Examines special issues relating to master data metadata. * Considers a range of MDM architectural styles. * Covers the synchronization of master data across the application infrastructure.

Data Governance: The Definitive Guide - Evren Eryurek 2021-03-08

As you move data to the cloud, you need to consider a comprehensive approach to data governance, along with well-defined and agreed-upon policies to ensure your organization meets compliance requirements. Data governance incorporates the ways people, processes, and technology work together to ensure data is trustworthy and can be used effectively. This practical guide shows you how to effectively implement and scale data governance throughout your organization. Chief information, data, and security officers and their teams will learn strategy and tooling to support democratizing data and unlocking its value while enforcing security, privacy, and other governance standards. Through good data governance, you can inspire customer trust, enable your organization to identify business efficiencies, generate more competitive offerings, and improve customer experience. This book shows you how. You'll learn: Data governance strategies addressing people, processes, and tools Benefits and challenges of a cloud-based data governance approach How data governance is conducted from ingest to preparation and use How to handle the ongoing improvement of data quality Challenges and techniques in governing streaming data Data protection for authentication, security, backup, and monitoring How to build a data culture in your organization

Brink's Modern Internal Auditing - Robert R. Moeller 2016-01-05

The complete guide to internal auditing for the modern world Brink's Modern Internal Auditing: A Common Body of Knowledge, Eighth Edition covers the fundamental information that you need to make your role as

internal auditor effective, efficient, and accurate. Originally written by one of the founders of internal auditing, Vic Brink and now fully updated and revised by internal controls and IT specialist, Robert Moeller, this new edition reflects the latest industry changes and legal revisions. This comprehensive resource has long been—and will continue to be—a critical reference for both new and seasoned internal auditors alike. Through the information provided in this inclusive text, you explore how to maximize your impact on your company by creating higher standards of professional conduct and greater protection against inefficiency, misconduct, illegal activity, and fraud. A key feature of this book is a detailed description of an internal audit Common Body of Knowledge (CBOOK), key governance; risk and compliance topics that all internal auditors need to know and understand. There are informative discussions on how to plan and perform internal audits including the information technology (IT) security and control issues that impact all enterprises today. Modern internal auditing is presented as a standard-setting branch of business that elevates professional conduct and protects entities against fraud, misconduct, illegal activity, inefficiency, and other issues that could detract from success. Contribute to your company's productivity and responsible resource allocation through targeted auditing practices Ensure that internal control procedures are in place, are working, and are leveraged as needed to support your company's performance Access fully-updated information regarding the latest changes in the internal audit industry Rely upon a trusted reference for insight into key topics regarding the internal audit field Brink's Modern Internal Auditing: A Common Body of Knowledge, Eighth Edition presents the comprehensive collection of information that internal auditors rely on to remain effective in their role.

IBM Information Governance Solutions - Chuck Ballard 2014-04-04 Managing information within the enterprise has always been a vital and important task to support the day-to-day business operations and to enable analysis of that data for decision making to better manage and grow the business for improved profitability. To do all that, clearly the data must be accurate and organized so it is accessible and understandable to all who need it. That task has grown in importance as the volume of enterprise data has been growing significantly (analyst estimates of 40 - 50% growth per year are not uncommon) over the years. However, most of that data has been what we call "structured" data, which is the type that can fit neatly into rows and columns and be more easily analyzed. Now we are in the era of "big data." This significantly increases the volume of data available, but it is in a form called "unstructured" data. That is, data from sources that are not as easily organized, such as data from emails, spreadsheets, sensors, video, audio, and social media sites. There is valuable information in all that data but it calls for new processes to enable it to be analyzed. All this has brought with it a renewed and critical need to manage and organize that data with clarity of meaning, understandability, and interoperability. That is, you must be able to integrate this data when it is from within an enterprise but also importantly when it is from many different external sources. What is described here has been and is being done to varying extents. It is called "information governance." Governing this information however has proven to be challenging. But without governance, much of the data can be less useful and perhaps even used incorrectly, significantly impacting enterprise decision making. So we must also respect the needs for information security, consistency, and validity or else suffer the potential economic and legal consequences. Implementing sound governance practices needs to be an integral part of the information control in our organizations. This IBM® Redbooks® publication focuses on the building blocks of a solid governance program. It examines some familiar governance initiative scenarios, identifying how they underpin key governance initiatives, such as Master Data Management, Quality Management, Security and Privacy, and Information Lifecycle Management. IBM Information Management and Governance solutions provide a comprehensive suite to help organizations better understand and build their governance solutions. The book also identifies new and innovative approaches that are developed by IBM practice leaders that can help as you implement the foundation capabilities in your organizations.

Responsible Design, Implementation and Use of Information and Communication Technology - Marié Hattingh 2020-04-06

This two-volume set constitutes the proceedings of the 19th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2020, held in Skukuza, South Africa, in April 2020.* The total of 80 full and 7 short papers presented in these volumes were carefully reviewed and selected from 191 submissions. The papers are organized in the following topical

sections: Part I: block chain; fourth industrial revolution; eBusiness; business processes; big data and machine learning; and ICT and education Part II: eGovernment; eHealth; security; social media; knowledge and knowledge management; ICT and gender equality and development; information systems for governance; and user experience and usability *Due to the global COVID-19 pandemic and the consequential worldwide imposed travel restrictions and lockdown, the I3E 2020 conference event scheduled to take place in Skukuza, South Africa, was unfortunately cancelled.

Digital Science Tatiana Antipova 2022-01-17

This book gathers selected papers that were submitted to the 2021 International Conference on Digital Science (DSIC 2021) that aims to make available the discussion and the publication of papers on all aspects of single and multidisciplinary research on conference topics. DSIC 2021 was held on October 15–17, 2021. An important characteristic feature of conference is the short publication time and worldwide distribution. Written by respected researchers, the book covers a range of innovative topics related to: digital economics; digital education; digital engineering; digital environmental sciences; digital finance, business and banking; digital health care, hospitals and rehabilitation; digital media; digital medicine, pharma and public health; digital public administration; digital technology and applied sciences. This book may be used for private and professional non-commercial research and classroom use (e.g., sharing the contribution by mail or in hard copy form with research colleagues for their professional non-commercial research and classroom use); for use in presentations or handouts for any level students, researchers, etc.; for the further development of authors' scientific career (e.g., by citing, and attaching contributions to job or grant application).

Health Informatics - E-Book - Ramona Nelson 2016-12-08

Awarded second place in the 2017 AJN Book of the Year Awards in the Information Technology category. See how information technology intersects with health care! Health Informatics: An Interprofessional Approach, 2nd Edition prepares you for success in today's technology-filled healthcare practice. Concise coverage includes information systems and applications such as electronic health records, clinical decision support, telehealth, ePatients, and social media tools, as well as system implementation. New to this edition are topics including data science and analytics, mHealth, principles of project management, and contract negotiations. Written by expert informatics educators Ramona Nelson and Nancy Staggers, this edition enhances the book that won a 2013 American Journal of Nursing Book of the Year award! Experts from a wide range of health disciplines cover the latest on the interprofessional aspects of informatics — a key Quality and Safety Education for Nurses (QSEN) initiative and a growing specialty area in nursing. Case studies encourage higher-level thinking about how concepts apply to real-world nursing practice. Discussion questions challenge you to think critically and to visualize the future of health informatics. Objectives, key terms and an abstract at the beginning of each chapter provide an overview of what you will learn. Conclusion and Future Directions section at the end of each chapter describes how informatics will continue to evolve as healthcare moves to an interprofessional foundation. NEW! Updated chapters reflect the current and evolving practice of health informatics, using real-life healthcare examples to show how informatics applies to a wide range of topics and issues. NEW mHealth chapter discusses the use of mobile technology, a new method of health delivery — especially for urban or under-served populations — and describes the changing levels of responsibility for both patients and providers. NEW Data Science and Analytics in Healthcare chapter shows how Big Data — as well as analytics using data mining and knowledge discovery techniques — applies to healthcare. NEW Project Management Principles chapter discusses proven project management tools and techniques for coordinating all types of health informatics-related projects. NEW Contract Negotiations chapter describes strategic methods and tips for negotiating a contract with a healthcare IT vendor. NEW Legal Issues chapter explains how federal regulations and accreditation processes may impact the practice of health informatics. NEW HITECH Act chapter explains the regulations relating to health informatics in the Health Information Technology for Education and Clinical Health Act as well as the Meaningful Use and Medicare Access & CHIP Reauthorization Act of 2015.

Decision Support Systems V - Big Data Analytics for Decision Making - Boris Delibašić 2015-05-18

This book constitutes the refereed proceedings of the First International Conference on Decision Support Systems Technology, ICDSST 2015, held

in Belgrade, Serbia, in May 2015. The theme of the event was “Big Data Analytics for Decision-Making” and it was organized by the EURO (Association of European Operational Research Societies) working group of Decision Support Systems (EWG-DSS). The eight papers presented in this book were selected out of 26 submissions after being carefully reviewed by at least three internationally known experts from the ICDSST 2015 Program Committee and external invited reviewers. The selected papers are representative of current and relevant research activities in the area of decision support systems, such as decision analysis for enterprise systems and non-hierarchical networks, integrated solutions for decision support and knowledge management in distributed environments, decision support system evaluations and analysis through social networks, and decision support system applications in real-world environments. The volume is completed by an additional invited paper on big data decision-making use cases.

Entity Information Life Cycle for Big Data - John R. Talburt
2015-04-20

Entity Information Life Cycle for Big Data walks you through the ins and outs of managing entity information so you can successfully achieve master data management (MDM) in the era of big data. This book explains big data's impact on MDM and the critical role of entity information management system (EIMS) in successful MDM. Expert authors Dr. John R. Talburt and Dr. Yinle Zhou provide a thorough background in the principles of managing the entity information life cycle and provide practical tips and techniques for implementing an EIMS, strategies for exploiting distributed processing to handle big data for EIMS, and examples from real applications. Additional material on the theory of EIMS and methods for assessing and evaluating EIMS performance also make this book appropriate for use as a textbook in courses on entity and identity management, data management, customer relationship management (CRM), and related topics. Explains the business value and impact of entity information management system (EIMS) and directly addresses the problem of EIMS design and operation, a critical issue organizations face when implementing MDM systems. Offers practical guidance to help you design and build an EIMS system that will successfully handle big data. Details how to measure and evaluate entity integrity in MDM systems and explains the principles and processes that comprise EIMS. Provides an understanding of features and functions an EIMS system should have that will assist in evaluating commercial EIMS systems. Includes chapter review questions, exercises, tips, and free downloads of demonstrations that use the OYSTER open source EIMS system. Executable code (Java .jar files), control scripts, and synthetic input data illustrate various aspects of CSRU life cycle such as identity capture, identity update, and assertions.

Data Governance Success - Rupa Mahanti 2021

While good data is an enterprise asset, bad data is an enterprise liability. Data governance enables you to effectively and proactively manage data assets throughout the enterprise by providing guidance in the form of policies, standards, processes and rules and defining roles and responsibilities outlining who will do what, with respect to data. While implementing data governance is not rocket science, it is not a simple exercise. There is a lot of confusion around what data governance is, and a lot of challenges in the implementation of data governance. Data governance is not a project or a one-off exercise but a journey that involves a significant amount of effort, time and investment and cultural change and a number of factors to take into consideration to achieve and sustain data governance success. *Data Governance Success: Growing and Sustaining Data Governance* is the third and final book in the Data Governance series and discusses the following: Data governance perceptions and challenges Key considerations when implementing data governance to achieve and sustain success Strategy and data governance Different data governance maturity frameworks Data governance people and process elements Data governance metrics This book shares the combined knowledge related to data and data governance that the author has gained over the years of working in different industrial and research programs and projects associated with data, processes, and technologies and unique perspectives of Thought Leaders and Data Experts through Interviews conducted. This book will be highly beneficial for IT students, academicians, information management and business professionals and researchers to enhance their knowledge to support and succeed in data governance implementations. This book is technology agnostic and contains a balance of concepts and examples and illustrations making it easy for the readers to understand and relate to their own specific data projects.

Emerging Perspectives in Big Data Warehousing - Taniar, David

2019-06-28

The concept of a big data warehouse appeared in order to store moving data objects and temporal data information. Moving objects are geometries that change their position and shape continuously over time. In order to support spatio-temporal data, a data model and associated query language is needed for supporting moving objects. *Emerging Perspectives in Big Data Warehousing* is an essential research publication that explores current innovative activities focusing on the integration between data warehousing and data mining with an emphasis on the applicability to real-world problems. Featuring a wide range of topics such as index structures, ontology, and user behavior, this book is ideally designed for IT consultants, researchers, professionals, computer scientists, academicians, and managers.

Integration Challenges for Analytics, Business Intelligence, and Data Mining - Azevedo, Ana 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.

Enterprise Big Data Engineering, Analytics, and Management - Atzmueller, Martin 2016-06-01

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, Algorithms and Food Safety - Salvatore Sapienza 2022-10-20

This book identifies the principles that should be applied when processing Big Data in the context of food safety risk assessments. Food safety is a critical goal in the protection of individuals' right to health and the flourishing of the food and feed market. Big Data is fostering new applications capable of enhancing the accuracy of food safety risk assessments. An extraordinary amount of information is analysed to detect the existence or predict the likelihood of future risks, also by means of machine learning algorithms. Big Data and novel analysis techniques are topics of growing interest for food safety agencies, including the European Food Safety Authority (EFSA). This wealth of information brings with it both opportunities and risks concerning the extraction of meaningful inferences from data. However, conflicting interests and tensions among the parties involved are hindering efforts to find shared methods for steering the processing of Big Data in a sound, transparent and trustworthy way. While consumers call for more transparency, food business operators tend to be reluctant to share informational assets. This has resulted in a considerable lack of trust in the EU food safety system. A recent legislative reform, supported by new legal cases, aims to restore confidence in the risk analysis system by reshaping the meaning of data ownership in this domain. While this regulatory approach is being established, breakthrough analytics techniques are encouraging thinking about the next steps in managing food safety data in the age of machine learning. The book focuses on two core topics - data ownership and data governance - by evaluating how the regulatory framework addresses the challenges raised by Big Data and its analysis in an applied, significant, and overlooked domain. To do

so, it adopts an interdisciplinary approach that considers both the technological advances and the policy tools adopted in the European Union, while also assuming an ethical perspective when exploring potential solutions. The conclusion puts forward a proposal: an ethical blueprint for identifying the principles – Security, Accountability, Fairness, Explainability, Transparency and Privacy – to be observed when processing Big Data for food safety purposes, including by means of machine learning. Possible implementations are then discussed, also in connection with two recent legislative proposals, namely the Data Governance Act and the Artificial Intelligence Act.

Big Data, Big Challenges: A Healthcare Perspective - Mowafa Househ 2019-02-26

This is the first book to offer a comprehensive yet concise overview of the challenges and opportunities presented by the use of big data in healthcare. The respective chapters address a range of aspects: from health management to patient safety; from the human factor perspective to ethical and economic considerations, and many more. By providing a historical background on the use of big data, and critically analyzing current approaches together with issues and challenges related to their applications, the book not only sheds light on the problems entailed by big data, but also paves the way for possible solutions and future research directions. Accordingly, it offers an insightful reference guide for health information technology professionals, healthcare managers, healthcare practitioners, and patients alike, aiding them in their decision-making processes; and for students and researchers whose work involves data science-related research issues in healthcare.

Data Governance Tools - Sunil Soares 2015-02-01

Comprehensively covers evaluation criteria for and capabilities of the software tools available for implementing a data governance program. Data governance programs often start off using programs such as Microsoft Excel and Microsoft SharePoint to document and share data governance artifacts. But these tools often lack critical functionality. Meanwhile, vendors have matured their data governance offerings to the extent that today's organizations need to consider tools as a critical component of their data governance programs. In this book, data governance expert Sunil Soares reviews the Enterprise Data Management (EDM) reference architecture and discusses key data governance tasks that can be automated by tools for business glossaries, metadata management, data profiling, data quality management, master data management, reference data management, and information policy management. Subsequent sections describe the integration points between EDM tools and data governance and examine how governance tools interact with big data technologies, including Hadoop, NoSQL, stream computing, and text analytics. The final section of the book discusses evaluation criteria for data governance tools and provides an overview of key vendor platforms, including ASG, Collibra, Global IDs, IBM, Informatica, Orchestra Networks, SAP, and Talend.

Multi-Domain Master Data Management - Mark Allen 2015-03-21

Multi-Domain Master Data Management delivers practical guidance and specific instruction to help guide planners and practitioners through the challenges of a multi-domain master data management (MDM) implementation. Authors Mark Allen and Dalton Cervo bring their expertise to you in the only reference you need to help your organization take master data management to the next level by incorporating it across multiple domains. Written in a business friendly style with sufficient program planning guidance, this book covers a comprehensive set of topics and advanced strategies centered on the key MDM disciplines of Data Governance, Data Stewardship, Data Quality Management, Metadata Management, and Data Integration. Provides a logical order toward planning, implementation, and ongoing management of multi-domain MDM from a program manager and data steward perspective. Provides detailed guidance, examples and illustrations for MDM practitioners to apply these insights to their strategies, plans, and processes. Covers advanced MDM strategy and instruction aimed at improving data quality management, lowering data maintenance costs, and reducing corporate risks by applying consistent enterprise-wide practices for the management and control of master data.

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.

Performance and Capacity Implications for Big Data Jewell 2014-02-07

Big data solutions enable us to change how we do business by exploiting previously unused sources of information in ways that were not possible just a few years ago. In IBM® Smarter Planet® terms, big data helps us to change the way that the world works. The purpose of this IBM Redpaper™ publication is to consider the performance and capacity implications of big data solutions, which must be taken into account for them to be viable. This paper describes the benefits that big data approaches can provide. We then cover performance and capacity considerations for creating big data solutions. We conclude with what this means for big data solutions, both now and in the future. Intended readers for this paper include decision-makers, consultants, and IT architects.

Driving Scientific and Engineering Discoveries Through the Convergence of HPC, Big Data and AI Jeffrey Nichols 2020-12-22

This book constitutes the revised selected papers of the 17th Smoky Mountains Computational Sciences and Engineering Conference, SMC 2020, held in Oak Ridge, TN, USA*, in August 2020. The 36 full papers and 1 short paper presented were carefully reviewed and selected from a total of 94 submissions. The papers are organized in topical sections of computational applications: converged HPC and artificial intelligence; system software: data infrastructure and life cycle; experimental/observational applications: use cases that drive requirements for AI and HPC convergence; deploying computation: on the road to a converged ecosystem; scientific data challenges. *The conference was held virtually due to the COVID-19 pandemic.

Resource Management for Big Data Platforms - Florin Pop 2016-10-27

Serving as a flagship driver towards advance research in the area of Big Data platforms and applications, this book provides a platform for the dissemination of advanced topics of theory, research efforts and analysis, and implementation oriented on methods, techniques and performance evaluation. In 23 chapters, several important formulations of the architecture design, optimization techniques, advanced analytics methods, biological, medical and social media applications are presented. These chapters discuss the research of members from the ICT COST Action IC1406 High-Performance Modelling and Simulation for Big Data Applications (cHiPSet). This volume is ideal as a reference for students, researchers and industry practitioners working in or interested in joining interdisciplinary works in the areas of intelligent decision systems using emergent distributed computing paradigms. It will also allow newcomers to grasp the key concerns and their potential solutions.

Inventive Computation and Information Technologies - S. Smys 2021

This book is a collection of best selected papers presented at the International Conference on Inventive Computation and Information Technologies (ICICIT 2020), organized during 24-25 September 2020. The book includes papers in the research area of information sciences and communication engineering. The book presents novel and innovative research results in theory, methodology and applications of communication engineering and information technologies.

Data Management, Analytics and Innovation - Neha Sharma 2021-10-21

This book presents the latest findings in the areas of data management and smart computing, machine learning, big data management, artificial intelligence, and data analytics, along with advances in network technologies. The book is a collection of peer-reviewed research papers presented at Fifth International Conference on Data Management, Analytics and Innovation (ICDMAI 2021), held during January 15-17, 2021, in a virtual mode. It addresses state-of-the-art topics and discusses challenges and solutions for future development. Gathering original, unpublished contributions by scientists from around the globe, the book is mainly intended for a professional audience of researchers and practitioners in academia and industry.

Getting in Front on Data - Thomas C. Redman, Ph.D. 2016-09-12

This is the single best book ever written on data quality. Clear, concise, and actionable. We all want to leverage our data resources to drive growth, but we too often ignore the fundamentals of data quality, which almost always inhibits our success. Tom lays out a clear path for each organization to holistically improve not only its data quality, but more importantly the performance of its business as a whole. —Jeffrey G. McMillan, Chief Analytics and Data Officer, Morgan Stanley This book lays out the roles everyone, up and down the organization chart, can and must play to ensure that data is up to the demands of its use, in day-in, day-out work, decision-making, planning, and analytics. By now, everyone knows that bad data extorts an enormous toll, adding huge (though often hidden) costs, and making it more difficult to make good decisions and leverage advanced analyses. While the problems are pervasive and insidious, they are also solvable! As Tom Redman, “the Data Doc,” explains in *Getting in Front on Data*, the secret lies in getting the right people in the right roles to “get in front” of the management and social issues that lead to bad data in the first place. Everyone should see himself or herself in this book. We are all both data customers and data creators—after all, we use data created by others and create data used by others. And all of us must step up to these roles. As data customers, we must clarify our most important needs and communicate them to data creators. As data creators, we must strive to meet those needs by finding and eliminating the root causes of error. *Getting in Front on Data* proposes new roles for data professionals as: embedded data managers, in helping data customers and creators complete their work, DQ team leads, in connecting customers and creators, pulling the entire program together, and training people on their new roles, data maestros, in providing deep expertise on the really tough problems, chief data architects, in establishing common data definitions, and technologists, in increasing scale and decreasing unit cost. *Getting in Front on Data* introduces a new role, the data provocateur, the motive force in attacking data quality properly! This book urges everyone to unleash their inner provocateur. Finally, it crystallizes what senior leaders must do if their entire organizations are to enjoy the benefits of high-quality data! Data quality has always been important. But now, in the growing digital economy where business transactions and customer experiences are automated and tailored, data quality is critical. This book comes just in time. —Maria C. Villar, Global Vice President, SAP America, Inc. Winning, and more importantly thriving, in the digital age requires more than stating “Data is a strategic corporate asset.” Leaders and organizations need a plan of action to make the new vision a reality. Tom's latest book is a how-to for those seeking that reality. —Bob Palermo, Vice President, Performance Excellence, Shell Unconventionals Many, if not most, companies still struggle with their data. With his latest offering, Tom Redman sets out a path they can follow to Get in Front on Data. Based on his decades of experience working with many companies and individuals, this is the most practical guide around. A must read for data professionals, and especially data “provocateurs”. —Ken Self, President IAIDQ This book offers a unique perspective on how to think about data and address Data Quality - offering practical guidance and useful instruction from the perspective of each stakeholder. The process - and processes - to go from business need to having the right quality data to address that need is no small task. —John Nicodemo, Global Leader, Data Quality, Dun & Bradstreet *Getting in Front on Data* is a clearly written survival handbook for the new data-driven economy. It is a “must read” for the employees of any organization expecting to remain relevant and competitive. The “Data Doc” has an extraordinary talent for explaining key concepts with simple examples and understandable analogies making it accessible to everyone in their organization regardless of their role. —John R. Talburt, Director of the Information Quality Graduate Program University of Arkansas at Little Rock

Big Data Governance Sunil Soares 2012-11-01

Written by a leading expert in the field, this account focuses on the convergence of two major trends in information management—big data and information governance—by taking a strategic approach oriented around business cases and industry imperatives. With the advent of new technologies, enterprises are expanding and handling very large volumes of data; this book, nontechnical in nature and geared toward business audiences, encourages the practice of establishing appropriate governance over big data initiatives and addresses how to manage and govern big data, highlighting the relevant processes, procedures, and policies. It teaches readers to understand how big data fits within an overall information governance program; quantify the business value of big data; apply information governance concepts such as stewardship,

metadata, and organization structures to big data; appreciate the wide-ranging business benefits for various industries and job functions; sell the value of big data governance to businesses; and establish step-by-step processes to implement big data governance.

Handbook of Research on Strategic Supply Chain Management in the Retail Industry - Kamath, Narasimha 2016-02-09

Customer satisfaction is a pivotal component to any business that provides goods or services to the public. By effectively managing the flow of products, business can adapt to the growing demands of consumers and deliver successful customer service. The *Handbook of Research on Strategic Supply Chain Management in the Retail Industry* is an authoritative reference source for the latest scholarly research on properly managing business processes in order to satisfy end-user requirements and increase competitive advantage in the retail marketplace. Highlighting concepts relating to field applications, customer relationships, and current trends in logistics management, this book is ideally designed for business professionals, managers, upper-level students, and researchers interested in innovative strategies and best practices in modern supply chains.

Big Data & Analytics Nadine Côte-Real 2022-10-14

TRANSFORME DADOS EM DECISÕES INTELIGENTES E POTENCIE A CRIAÇÃO DE VANTAGENS COMPETITIVAS. Os dados são considerados o novo petróleo do século XXI e o verdadeiro ativo escondido nas empresas. Nunca se produziram, trocaram e partilharam tantos dados ao atual ritmo exponencial e alucinante. A este fenómeno chamamos big data. O aparecimento do big data e da Internet of Things veio desafiar a forma como guardamos, processamos, gerimos e analisamos esses mesmos dados, revolucionando a vida e o comportamento tanto da sociedade como das empresas. Nunca foi tão difícil selecionar informação fidedigna, pois são tantas as fontes de informação como de desinformação. Nesta era digital, saber olhar para a informação certa no momento certo é crucial na tomada de decisão. Por isso, ser data-driven, deixar os dados falarem por si só e tomar decisões com base em smart data, é uma transformação profunda que, certamente, mudará o rumo dos negócios das empresas. Neste guia prático, Nadine Côte-Real, especialista em Gestão de Informação, concentra num só livro um conjunto de boas práticas e recomendações em várias vertentes da gestão de informação: governação, big data analytics e inteligência artificial responsável. Através deste livro conseguirá obter conhecimento estratégico para: - Gerir e governar informação de forma eficiente para o negócio, promovendo oportunidades de monetização dos dados e criando vantagens competitivas, seja qual for a indústria, a dimensão e contexto tecnológico da empresa; - Potenciar a aceleração digital do negócio e criar um ecossistema de inovação e transformação digital alinhado com os objetivos estratégicos da empresa; - Assegurar a adoção de ferramentas de governação, big data analytics e inteligência artificial para criar valor de negócio sustentável e contínuo; #- Promover o desenvolvimento de uma organização data-driven com foco na inteligência da informação e conhecimento do negócio.

Data Governance for Managers - Lars Michael Bollweg 2022-05-13

Professional data management is the foundation for the successful digital transformation of traditional companies. Unfortunately, many companies fail to implement data governance because they do not fully understand the complexity of the challenge (organizational structure, employee empowerment, change management, etc.) and therefore do not include all aspects in the planning and implementation of their data governance. This book explains the driving role that a responsive data organization can play in a company's digital transformation. Using proven process models, the book takes readers from the basics, through planning and implementation, to regular operations and measuring the success of data governance. All the important decision points are highlighted, and the advantages and disadvantages are discussed in order to identify digitization potential, implement it in the company, and develop customized data governance. The book will serve as a useful guide for interested newcomers as well as for experienced managers.

Information Governance Principles and Practices for a Big Data Landscape - Chuck Ballard 2014-03-31

This IBM® Redbooks® publication describes how the IBM Big Data Platform provides the integrated capabilities that are required for the adoption of Information Governance in the big data landscape. As organizations embark on new use cases, such as Big Data Exploration, an enhanced 360 view of customers, or Data Warehouse modernization, and absorb ever growing volumes and variety of data with accelerating velocity, the principles and practices of Information Governance become ever more critical to ensure trust in data and help organizations

overcome the inherent risks and achieve the wanted value. The introduction of big data changes the information landscape. Data arrives faster than humans can react to it, and issues can quickly escalate into significant events. The variety of data now poses new privacy and security risks. The high volume of information in all places makes it harder to find where these issues, risks, and even useful information to drive new value and revenue are. Information Governance provides an

organization with a framework that can align their wanted outcomes with their strategic management principles, the people who can implement those principles, and the architecture and platform that are needed to support the big data use cases. The IBM Big Data Platform, coupled with a framework for Information Governance, provides an approach to build, manage, and gain significant value from the big data landscape.