Ibm Spss Modeler Documentation

Software Architecture for Big Data and the Cloud is designed to be a single resource that brings together research on how software architectures can solve the challenges imposed by building big data software systems. The challenges of big data on the software architecture can relate to scale, security, integrity, performance, concurrency, parallelism, and dependability, amongst others. Big data handling requires rethinking architectural solutions to meet functional and non-functional requirements related to volume, variety and velocity. The book's editors have varied and complementary backgrounds in requirements and architecture, specifically in software architectures for cloud and big data, as well as expertise in software engineering for cloud and big data. This book brings together work across different disciplines in software engineering, including work expanded from conference tracks and workshops led by the editors. Discusses systematic and disciplined approaches to building software architectures for cloud and big data with state-of-the-art methods and techniques Presents case studies involving enterprise, business, and government service deployment of big data applications Shares guidance on theory, frameworks, methodologies, and architecture for cloud and big data

The book presents high quality research work in cutting edge technologies and most-happening areas of computational intelligence and data engineering. It contains selected papers presented at International Conference on Computational Intelligence and Data Engineering (ICCIDE 2017). The conference was conceived as a forum for presenting and exchanging ideas and results of the researchers from academia and industry onto a common platform and help them develop a comprehensive understanding of the challenges of technological advancements from different viewpoints. This book will help in fostering a healthy and vibrant relationship between academia and industry. The topics of the conference include, but are not limited to collective intelligence, intelligent transportation systems, fuzzy systems, Bayesian network, ant colony optimization, data privacy and security, data mining, data warehousing, big data analytics, cloud computing, natural language processing, swarm intelligence, and speech processing.

Put Predictive Analytics into Action Learn the basics of Predictive Analysis and Data Mining through an easy to understand conceptual framework and immediately practice the concepts learned using the open source RapidMiner tool. Whether you are brand new to Data Mining or working on your tenth project, this book will show you how to analyze data, uncover hidden patterns and relationships to aid important decisions and predictions. Data Mining has become an essential tool for any enterprise that collects, stores and processes data as part of its operations. This book is ideal for business users, data analysts, business analysts, business intelligence and data warehousing professionals and for anyone who wants to learn Data Mining. You'll be able to: 1. Gain the necessary knowledge of different data mining techniques, so that you can select the right technique for a given data problem and create a general purpose analytics process. 2. Get up and running fast with more than two dozen commonly used powerful algorithms for predictive analytics using practical use cases. 3. Implement a simple step-by-step process for predicting an outcome or discovering hidden relationships from the data using RapidMiner, an open source GUI based data mining tool Predictive analytics and Data Mining techniques covered: Exploratory Data Analysis, Visualization, Decision trees, Rule induction, k-Nearest Neighbors, Naïve Bayesian, Artificial Neural Networks, Support Vector machines, Ensemble models, Bagging, Boosting, Random Forests, Linear regression, Logistic regression, Association analysis using Apriori and FP Growth, K-Means clustering, Density based clustering, Self Organizing Maps, Text Mining, Time series forecasting, Anomaly detection and Feature selection. Implementation files can be downloaded from the book companion site at www.LearnPredictiveAnalytics.com Demystifies data mining concepts with easy to understand language Shows how to get up and running fast with 20 commonly used powerful techniques for predictive analysis Explains the process of using open source RapidMiner tools Discusses a simple 5 step process for implementing algorithms that can be used for performing predictive analytics Includes practical use cases and examples

This IBM® Redbooks® publication addresses topics to help clients to take advantage of the virtualization strengths of the POWER® platform to solve system resource utilization challenges and maximize system throughput and capacity. This publication examines the tools, utilities, documentation, and other resources available to help technical teams provide business solutions and support for Cognos® Business Intelligence (BI) and Statistical Package for the Social Sciences (SPSS®) on Power SystemsTM virtualized environments. This book addresses topics to help address complex high availability requirements, help maximize the availability of systems, and provide expert-level documentation to the worldwide support teams. This book strengthens the position of the Cognos and SPSS solutions with a well-defined and documented deployment model within a POWER system virtualized environment. This model provides clients with a planned foundation for security, scaling, capacity, resilience, and optimization. This book is targeted toward technical professionals (BI consultants, technical support staff, IT Architects, and IT Specialists) who are responsible for providing Smart Analytics solutions and support for Cognos and SPSS on Power Systems.

This book discusses the advanced databases for the cloud-based application known as NoSQL. It will explore the recent advancements in NoSQL database technology. Chapters on structured, unstructured and hybrid databases will be included to explore bigdata analytics, bigdata storage and processing. The book is likely to cover a wide range of topics such as cloud computing, social computing, bigdata and advanced databases processing techniques.

A practical guide on Machine learning with IBM cloud to act as a solid yet concise reference for the readers. You will learn about the role of data representation and feature extraction in machine learning. This book will help you learn how to use the IBM Cloud and Watson Machine learning service to develop real-world machine learning solutions.

Bridge the gap between analytics and execution, and actually translate analytics into better business decision-making! Now that you've collected data and crunched numbers, Applied Business Analytics reveals how to fully apply the information and knowledge you've gleaned from quants and tech teams. Nathaniel Lin explains why "analytics value chains" often break due to organizational and cultural issues, and offers "in the trenches" guidance for overcoming these obstacles. You'll discover why a special breed of "analytics deciders" is indispensable for any organization that seeks to compete on analytics… how to become one of those deciders… and how to identify, foster, support, empower, and reward others to join you. Lin draws on actual cases and examples from his own experience, augmenting them with hands-on examples and exercises to integrate analytics at all levels: from top-level business questions to low-level technical details. Along the way, you'll learn how to bring together analytics team members with widely diverse goals, knowledge, and backgrounds. Coverage includes: How analytical and

conventional decision making differ — and the challenging implications How to determine who your analytics deciders are, and ought to be Proven best practices for actually applying analytics to decision-making How to optimize your use of analytics as an analyst, manager, executive, or C-level officer Applied Business Analytics will be invaluable to wide audiences of professionals, decision-makers, and consultants involved in analytics, including Chief Analytics Officers, Chief Data Officers, Chief Scientists, Chief Marketing Officers, Chief Risk Officers, Chief Strategy Officers, VPs of Analytics and/or Big Data, data scientists, business strategists, and line of business executives. It will also be exceptionally useful to students of analytics in any graduate, undergraduate, or certificate program, including candidates for INFORMS certification.

In this IBM® Redbooks® publication, we discuss and describe the positioning, functions, capabilities, and advanced programming techniques for IBM InfoSphereTM Streams (V2), a new paradigm and key component of IBM Big Data platform. Data has traditionally been stored in files or databases, and then analyzed by queries and applications. With stream computing, analysis is performed moment by moment as the data is in motion. In fact, the data might never be stored (perhaps only the analytic results). The ability to analyze data in motion is called real-time analytic processing (RTAP). IBM InfoSphere Streams takes a fundamentally different approach to Big Data analytics and differentiates itself with its distributed runtime platform, programming model, and tools for developing and debugging analytic applications that have a high volume and variety of data types. Using in-memory techniques and analyzing record by record enables high velocity. Volume, variety and velocity are the key attributes of Big Data. The data streams that are consumable by IBM InfoSphere Streams can originate from sensors, cameras, news feeds, stock tickers, and a variety of other sources, including traditional databases. It provides an execution platform and services for applications that ingest, filter, analyze, and correlate potentially massive volumes of continuous data streams. This book is intended for professionals that require an understanding of how to process high volumes of streaming data or need information about how to implement systems to satisfy those requirements. See: http://www.redbooks.ibm.com/abstracts/sg247865.html for the IBM InfoSphere Streams (V1) release.

This book constitutes the proceedings of the Third International Conference on Physiological Computing Systems, PhyCS 2016, held in Lisbon, Portugal, in July 2016. The 12 papers presented in this volume were carefully reviewed and selected from numerous submissions. They contribute to the understanding of relevant trends of current research on physiological computing systems, including brain-computer interfaces, virtual reality, psychophysiological load assessment in unconstrained scenarios, body tracking and movement pattern recognition, emotion recognition, machine learning applied to diabetes and hypertension, tangible biofeedback technologies, multimodal sensor data fusion, and deep learning for hand gesture recognition.

Future buildings require not only energy efficiency but also proper building automation and control system functionalities in order to respond to the needs of occupants and energy grids. These development paths require a focus on occupant needs such as good indoor climate, easy operability, and monitoring. Another area to be tackled is energy flexibility, which is needed to make buildings responsive to the price signals of electricity grids with increasing amounts of fluctuating renewable energy generation installed both in central grids and at building sites. This Special Issue is dedicated to HVAC systems, load shifting, indoor climate, and energy and ventilation performance analyses in buildings. All these topics are important for improving the energy performance of new and renovated buildings within the roadmap of low energy and nearly zero energy buildings. To improve energy performance and, at the same time, occupant comfort and wellbeing, new technical solutions are required. Occupancy patterns and recognition, intelligent building management, demand response and performance of heating, cooling and ventilation systems are some common keywords in the articles of this Special Issue contributing to future highly performing buildings with reliable operation.

This IBM® Redbooks® publication series explains the assessment and implementation of a workload, integrated within IBM Smarter Banking® Showcase, and hosted at IBM Montpellier, France. Intended for decision-makers, consultants, architects, administrators, and specialists, this book is the second volume in a series of two: Assessment: Volume 1 (SG24-8007) describes how to evaluate the requirements of a new Smarter Analytics workload, addressing the user, system resources, and data processing profiles to identify the most optimal configuration by using IBM methodologies, such as fit-for-purpose. Given that the existing showcase is based on the IBM zEnterprise® System, deployment options include IBM z/OS®, Linux on IBM System z®, IBM AIX® running on IBM POWER® processor-based blades within the zEnterprise BladeCenter® Extension (zBX), and Windows Server 2008 running on System x® and BladeCenter blades also within zBX. Implementation: Volume 2 (SG24-8008), which you are reading, describes the setups that are involved in deploying the Smarter Analytics workload within the showcase. With multiple components, including IBM Cognos® BI, IBM Cognos TM1®, Cognos Metric Studio, IBM DB2® for z/OS, and a number of application design tools, the workload spans multiple operating environments. The use of application clustering, setting up performance policies by using Unified Resource Manager, and simulation test execution results are included.

McKinsey Global Institute predicts Internet of Things (IoT) could generate up to $11.1 trillion a year in economic value by 2025. Gartner Research Company expects 20 billion inter-connected devices by 2020 and, as per Gartner, the IoT will have a significant impact on the economy by transforming many enterprises into digital businesses and facilitating new business models, improving efficiency and increasing employee and customer engagement. It's clear from above and our research that the IoT is a game changer and will have huge positive impact in foreseeable future. In order to harvest the benefits of IoT revolution, the traditional software development paradigms must be fully upgraded. The mission of our book, is to prepare current and future software engineering teams with the skills and tools to fully utilize IoT capabilities. The book introduces essential IoT concepts from the perspectives of full-scale software development with the emphasis on creating niche blue ocean products. It also: Outlines a fundamental full stack architecture for IoT Describes various development technologies in each IoT layer Explains IoT solution development from Product management perspective Extensively covers security and applicable threat models as part of IoT stack The book provides details of several IoT reference architectures with emphasis on data integration, edge analytics, cluster architectures and closed loop responses.

How to Transform Your Organization with Analytics: Insider Lessons from IBM's Pioneering Experience Analytics is not just a technology: It is a better way to do business. Using analytics, you can systematically inform human judgment with data-driven insight. This doesn't just improve decision-making: It also enables greater innovation and creativity in support of strategy. Your transformation won't happen overnight; however, it is absolutely achievable, and the rewards are immense. This book demystifies your analytics journey by showing you how IBM has successfully leveraged analytics across the enterprise, worldwide. Three of IBM's pioneering analytics practitioners share invaluable real-world perspectives on what does and doesn't work and how you can start or accelerate your own transformation. This book provides an essential framework for becoming a smarter enterprise and shows through 31 case studies how IBM has derived value from analytics throughout its business. Coverage Includes Creating a smarter workforce through big data and analytics More effectively optimizing supply chain processes Systematically improving financial forecasting Managing financial risk, increasing operational efficiency, and creating business value Reaching more B2B or B2C customers and deepening their engagement Optimizing manufacturing and product management processes Deploying your sales organization to increase revenue and effectiveness Achieving new levels of excellence in services delivery and reducing risk Transforming IT to enable wider use of analytics "Measuring the immeasurable" and filling gaps in imperfect data Whatever your industry or role, whether a current or future leader, analytics can make you smarter and more competitive. Analytics Across the Enterprise shows how IBM did it--and how you can, too. Learn more about IBM Analytics

This book occupies a unique position in the field of statistical analysis in the behavioural and social sciences in that it targets learners who would benefit from learning more conceptually and less computationally about statistical procedures and the software packages that can be used to implement them. This book provides a comprehensive overview of this important research skill domain with an emphasis on visual support for learning and better understanding. The primary focus is on fundamental concepts, procedures and interpretations of statistical analyses within a single broad illustrative research context. The book covers a wide range of descriptive, correlational and inferential statistical procedures as well as more advanced procedures not typically covered in introductory and intermediate statistical texts. It is an ideal reference for postgraduate students as well as for researchers seeking to broaden their conceptual exposure to what is possible in statistical analysis.

The intention behind this book is to illustrate the deep relation among human behavior, data-centric science, and social design. In fact, these three issues have been independently developing in different fields, although they are, of course, deeply interrelated to one another. Specifically, fundamental understanding of human behavior should be employed for investigating our human society and designing social systems. Insights and both quantitative and qualitative understandings of collective human behavior are quite useful when social systems are designed. Fundamental principles of human behavior, theoretical models of human behavior, and information cascades are addressed as aspects of human behavior. Data-driven investigation of human nature, social behavior, and societal systems are developed as aspects of data-centric science. As design aspects, how to design social systems from heterogeneous memberships is explained. There is also discussion of these three aspects—human behavior, data-centric science, and social design—independently and with regard to the relationships among them.

This IBM RedpaperTM publication focuses on the integration between IBM® SPSS® Modeler and R. The paper is aimed at people who know IBM SPSS Modeler and have only a very limited knowledge of R. Chapters 2, 3, and 4 provide you with a high level understanding of R integration within SPSS Modeler enabling you to create or recreate some very basic R models within SPSS Modeler, even if you have only a basic knowledge of R. Chapter 5 provides more detailed tips and tricks. This chapter is for the experienced user and consists of items that might help you get up to speed with more detailed functions of the integration and understand some pitfalls.

Business intelligence (BI) tools are capable of working with healthcare data in an efficient manner to generate real-time information and knowledge relevant to the success of healthcare organizations. Further, BI tools benefit healthcare professionals making critical decisions within hospitals, clinics, and physicians' offices. Applying Business Intelligence to Clinical and Healthcare Organizations presents new solutions for data analysis within the healthcare sector in order to improve the quality of medical care and patient quality of life. Business intelligence models and techniques are explored and their benefits for the healthcare sector exposed in this timely research-based publication comprised of chapters written by professionals and researchers from around the world. Hospital administrators, healthcare professionals, biomedical engineers, informatics engineers, and students in graduate-level healthcare management programs will find this publication essential to their professional development and research needs.

Although the terms "data mining" and "knowledge discovery and data mining" (KDDM) are sometimes used interchangeably, data mining is actually just one step in the KDDM process. Data mining is the process of extracting useful information from data, while KDDM is the coordinated process of understanding the business and mining the data in order to id

Using zEnterprise for Smart Analytics: Volume 2 ImplementationIBM Redbooks

At first glance, the skills required to work in the data science field appear to be self-explanatory. Do not be fooled. Impactful data science demands an interdisciplinary knowledge of business philosophy, project management, salesmanship, presentation, and more. In Managing Your Data Science Projects, author Robert de Graaf explores important concepts that are frequently overlooked in much of the instructional literature that is available to data scientists new to the field. If your completed models are to be used and maintained most effectively, you must be able to present and sell them within your organization in a compelling way. The value of data science within an organization cannot be overstated. Thus, it is vital that strategies and communication between teams are dexterously managed. Three main ways that data science strategy is used in a company is to

research its customers, assess risk analytics, and log operational measurements. These all require different managerial instincts, backgrounds, and experiences, and de Graaf cogently breaks down the unique reasons behind each. They must align seamlessly to eventually be adopted as dynamic models. Data science is a relatively new discipline, and as such, internal processes for it are not as well-developed within an operational business as others. With Managing Your Data Science Projects, you will learn how to create products that solve important problems for your customers and ensure that the initial success is sustained throughout the product's intended life. Your users will trust you and your models, and most importantly, you will be a more well-rounded and effectual data scientist throughout your career. Who This Book Is For Early-career data scientists, managers of data scientists, and those interested in entering the field of data science

Artificial intelligence (AI) stands out as a transformational technology of the digital age. Its practical applications are growing very rapidly. One of the chief reasons AI applications are attaining prominence, is in its design to learn continuously, from real-world use and experience, and its capability to improve its performance. It is no wonder that the applications of AI span from complex high-technology equipment manufacturing to personalized exclusive recommendations to end-users. Many deployments of AI software, given its continuous learning need, require computation platforms that are resource intense, and have sustained connectivity and perpetual power through central electrical grid. In order to harvest the benefits of AI revolution to all of humanity, traditional AI software development paradigms must be upgraded to function effectively in environments that have resource constraints, small form factor computational devices with limited power, devices with intermittent or no connectivity and/or powered by non-perpetual source or battery power. The aim this book is to prepare current and future software engineering teams with the skills and tools to fully utilize AI capabilities in resource-constrained devices. The book introduces essential AI concepts from the perspectives of full-scale software development with emphasis on creating niche Blue Ocean small form factored computational environment products.

This three-volume set of books highlights major advances in the development of concepts and techniques in the area of new technologies and architectures of contemporary information systems. Further, it helps readers solve specific research and analytical problems and glean useful knowledge and business value from the data. Each chapter provides an analysis of a specific technical problem, followed by a numerical analysis, simulation and implementation of the solution to the real-life problem. Managing an organisation, especially in today's rapidly changing circumstances, is a very complex process. Increased competition in the marketplace, especially as a result of the massive and successful entry of foreign businesses into domestic markets, changes in consumer behaviour, and broader access to new technologies and information, calls for organisational restructuring and the introduction and modification of management methods using the latest advances in science. This situation has prompted many decision-making bodies to introduce computer modelling of organisation management systems. The three books present the peer-reviewed proceedings of the 39th International Conference "Information Systems Architecture and Technology" (ISAT), held on September 16–18, 2018 in Nysa, Poland. The conference was organised by the Computer Science and Management Systems Departments, Faculty of Computer Science and Management, Wroclaw University of Technology and Sciences and University of Applied Sciences in Nysa, Poland. The papers have been grouped into three major parts: Part I—discusses topics including but not limited to Artificial Intelligence Methods, Knowledge Discovery and Data Mining, Big Data, Knowledge Based Management, Internet of Things, Cloud Computing and High Performance Computing, Distributed Computer Systems, Content Delivery Networks, and Service Oriented Computing. Part II—addresses topics including but not limited to System Modelling for Control, Recognition and Decision Support, Mathematical Modelling in Computer System Design, Service Oriented Systems and Cloud Computing, and Complex Process Modelling. Part III—focuses on topics including but not limited to Knowledge Based Management, Modelling of Financial and Investment Decisions, Modelling of Managerial Decisions, Production Systems Management and Maintenance, Risk Management, Small Business Management, and Theories and Models of Innovation.

With the advent of electronic medical records years ago and the increasing capabilities of computers, our healthcare systems are sitting on growing mountains of data. Not only does the data grow from patient volume but the type of data we store is also growing exponentially. Practical Predictive Analytics and Decisioning Systems for Medicine provides research tools to analyze these large amounts of data and addresses some of the most pressing issues and challenges where data integrity is compromised: patient safety, patient communication, and patient information. Through the use of predictive analytic models and applications, this book is an invaluable resource to predict more accurate outcomes to help improve quality care in the healthcare and medical industries in the most cost–efficient manner. Practical Predictive Analytics and Decisioning Systems for Medicine provides the basics of predictive analytics for those new to the area and focuses on general philosophy and activities in the healthcare and medical system. It explains why predictive models are important, and how they can be applied to the predictive analysis process in order to solve real industry problems. Researchers need this valuable resource to improve data analysis skills and make more accurate and cost-effective decisions. Includes models and applications of predictive analytics why they are important and how they can be used in healthcare and medical research Provides real world step-by-step tutorials to help beginners understand how the predictive analytic processes works and to successfully do the computations Demonstrates methods to help sort through data to make better observations and allow you to make better predictions

Systems of record (SORs) are engines that generates value for your business. Systems of engagement (SOE) are always evolving and generating new customer-centric experiences and new opportunities to capitalize on the value in the systems of record. The highest value is gained when systems of record and systems of engagement are brought together to deliver insight. Systems of insight (SOI) monitor and analyze what is going on with various behaviors in the systems of engagement and information being

stored or transacted in the systems of record. SOIs seek new opportunities, risks, and operational behavior that needs to be reported or have action taken to optimize business outcomes. Systems of insight are at the core of the Digital Experience, which tries to derive insights from the enormous amount of data generated by automated processes and customer interactions. Systems of Insight can also provide the ability to apply analytics and rules to real-time data as it flows within, throughout, and beyond the enterprise (applications, databases, mobile, social, Internet of Things) to gain the wanted insight. Deriving this insight is a key step toward being able to make the best decisions and take the most appropriate actions. Examples of such actions are to improve the number of satisfied clients, identify clients at risk of leaving and incentivize them to stay loyal, identify patterns of risk or fraudulent behavior and take action to minimize it as early as possible, and detect patterns of behavior in operational systems and transportation that lead to failures, delays, and maintenance and take early action to minimize risks and costs. IBM® Operational Decision Manager is a decision management platform that provides capabilities that support both event-driven insight patterns, and business-rule-driven scenarios. It also can easily be used in combination with other IBM Analytics solutions, as the detailed examples will show. IBM Operational Decision Manager Advanced, along with complementary IBM software offerings that also provide capability for systems of insight, provides a way to deliver the greatest value to your customers and your business. IBM Operational Decision Manager Advanced brings together data from different sources to recognize meaningful trends and patterns. It empowers business users to define, manage, and automate repeatable operational decisions. As a result, organizations can create and shape customer-centric business moments. This IBM Redbooks® publication explains the key concepts of systems of insight and how to implement a system of insight solution with examples. It is intended for IT architects and professionals who are responsible for implementing a systems of insights solution requiring event-based context pattern detection and deterministic decision services to enhance other analytics solution components with IBM Operational Decision Manager Advanced.

This book constitutes the refereed proceedings of the 19th International Conference on Applications of Natural Language to Information Systems, NLDB 2014, held in Montpellier, France, in June 2014. The 13 long papers, 8 short papers, 14 poster papers, and 7 demo papers presented together with 2 invited talks in this volume were carefully reviewed and selected from 73 submissions. The papers cover the following topics: syntactic, lexical and semantic analysis; information extraction; information retrieval and sentiment analysis and social networks.

Get to grips with the fundamentals of data mining and predictive analytics with IBM SPSS Modeler Key Features Get up–and-running with IBM SPSS Modeler without going into too much depth. Identify interesting relationships within your data and build effective data mining and predictive analytics solutions A quick, easy–to-follow guide to give you a fundamental understanding of SPSS Modeler, written by the best in the business Book Description IBM SPSS Modeler allows users to quickly and efficiently use predictive analytics and gain insights from your data. With almost 25 years of history, Modeler is the most established and comprehensive Data Mining workbench available. Since it is popular in corporate settings, widely available in university settings, and highly compatible with all the latest technologies, it is the perfect way to start your Data Science and Machine Learning journey. This book takes a detailed, step-by-step approach to introducing data mining using the de facto standard process, CRISP-DM, and Modeler's easy to learn "visual programming" style. You will learn how to read data into Modeler, assess data quality, prepare your data for modeling, find interesting patterns and relationships within your data, and export your predictions. Using a single case study throughout, this intentionally short and focused book sticks to the essentials. The authors have drawn upon their decades of teaching thousands of new users, to choose those aspects of Modeler that you should learn first, so that you get off to a good start using proven best practices. This book provides an overview of various popular data modeling techniques and presents a detailed case study of how to use CHAID, a decision tree model. Assessing a model's performance is as important as building it; this book will also show you how to do that. Finally, you will see how you can score new data and export your predictions. By the end of this book, you will have a firm understanding of the basics of data mining and how to effectively use Modeler to build predictive models. What you will learn Understand the basics of data mining and familiarize yourself with Modeler's visual programming interface Import data into Modeler and learn how to properly declare metadata Obtain summary statistics and audit the quality of your data Prepare data for modeling by selecting and sorting cases, identifying and removing duplicates, combining data files, and modifying and creating fields Assess simple relationships using various statistical and graphing techniques Get an overview of the different types of models available in Modeler Build a decision tree model and assess its results Score new data and export predictions Who this book is for This book is ideal for those who are new to SPSS Modeler and want to start using it as quickly as possible, without going into too much detail. An understanding of basic data mining concepts will be helpful, to get the best out of the book.

Proven guidance for expertly using analytics in fraud examinations, financial analysis, auditing and fraud prevention Fraud Analytics thoroughly reveals the elements of analysis that are used in today's fraud examinations, fraud investigations, and financial crime investigations. This valuable resource reviews the types of analysis that should be considered prior to beginning an investigation and explains how to optimally use data mining techniques to detect fraud. Packed with examples and sample cases illustrating pertinent concepts in practice, this book also explores the two major data analytics providers: ACL and IDEA. Looks at elements of analysis used in today's fraud examinations Reveals how to use data mining (fraud analytic) techniques to detect fraud Examines ACL and IDEA as indispensable tools for fraud detection Includes an abundance of sample cases and examples Written by Delena D Spann, Board of Regent (Emeritus) for the Association of Certified Fraud Examiners (ACFE), who currently serves as Advisory Board Member of the Association of Certified Fraud Examiners, Board Member of the Education Task Force of the Association of Certified Anti-Money Laundering Specialists ASIS

International (Economic Crime Council) and Advisory Board Member of the Robert Morris University (School of Business), Fraud Analytics equips you with authoritative fraud analysis techniques you can put to use right away.

Praise for the First Edition "...a well-written book on data analysis and data mining that provides an excellent foundation..." —CHOICE "This is a must-read book for learning practical statistics and data analysis..." —Computing Reviews.com A proven go-to guide for data analysis, Making Sense of Data I: A Practical Guide to Exploratory Data Analysis and Data Mining, Second Edition focuses on basic data analysis approaches that are necessary to make timely and accurate decisions in a diverse range of projects. Based on the authors' practical experience in implementing data analysis and data mining, the new edition provides clear explanations that guide readers from almost every field of study. In order to facilitate the needed steps when handling a data analysis or data mining project, a step-by-step approach aids professionals in carefully analyzing data and implementing results, leading to the development of smarter business decisions. The tools to summarize and interpret data in order to master data analysis are integrated throughout, and the Second Edition also features: Updated exercises for both manual and computer-aided implementation with accompanying worked examples New appendices with coverage on the freely available TraceisTM software, including tutorials using data from a variety of disciplines such as the social sciences, engineering, and finance New topical coverage on multiple linear regression and logistic regression to provide a range of widely used and transparent approaches Additional real-world examples of data preparation to establish a practical background for making decisions from data Making Sense of Data I: A Practical Guide to Exploratory Data Analysis and Data Mining, Second Edition is an excellent reference for researchers and professionals who need to achieve effective decision making from data. The Second Edition is also an ideal textbook for undergraduate and graduate-level courses in data analysis and data mining and is appropriate for cross-disciplinary courses found within computer science and engineering departments.

Many fundamental technological and managerial issues surrounding the development and implementation of intelligent analytics within multi-industry applications remain unsolved. There are still questions surrounding the foundation of intelligent analytics, the elements, the big characteristics, and the effects on business, management, technology, and society. Research is devoted to answering these questions and understanding how intelligent analytics can improve healthcare, mobile commerce, web services, cloud services, blockchain, 5G development, digital transformation, and more. Intelligent Analytics With Advanced Multi-Industry Applications is a critical reference source that explores cutting-edge theories, technologies, and methodologies of intelligent analytics with multi-industry applications and emphasizes the integration of artificial intelligence, business intelligence, big data, and analytics from a perspective of computing, service, and management. This book also provides real-world applications of the proposed concept of intelligent analytics to e-SMACS (electronic, social, mobile, analytics, cloud, and service) commerce and services, healthcare, the internet of things, the sharing economy, cloud computing, blockchain, and Industry 4.0. This book is ideal for scientists, engineers, educators, university students, service and management professionals, policymakers, decision makers, practitioners, stakeholders, researchers, and others who have an interest in how intelligent analytics are being implemented and utilized in diverse industries.

A concise introduction to the emerging field of data science, explaining its evolution, relation to machine learning, current uses, data infrastructure issues, and ethical challenges. The goal of data science is to improve decision making through the analysis of data. Today data science determines the ads we see online, the books and movies that are recommended to us online, which emails are filtered into our spam folders, and even how much we pay for health insurance. This volume in the MIT Press Essential Knowledge series offers a concise introduction to the emerging field of data science, explaining its evolution, current uses, data infrastructure issues, and ethical challenges. It has never been easier for organizations to gather, store, and process data. Use of data science is driven by the rise of big data and social media, the development of high-performance computing, and the emergence of such powerful methods for data analysis and modeling as deep learning. Data science encompasses a set of principles, problem definitions, algorithms, and processes for extracting non-obvious and useful patterns from large datasets. It is closely related to the fields of data mining and machine learning, but broader in scope. This book offers a brief history of the field, introduces fundamental data concepts, and describes the stages in a data science project. It considers data infrastructure and the challenges posed by integrating data from multiple sources, introduces the basics of machine learning, and discusses how to link machine learning expertise with real-world problems. The book also reviews ethical and legal issues, developments in data regulation, and computational approaches to preserving privacy. Finally, it considers the future impact of data science and offers principles for success in data science projects.

This book examines the impact of digital innovation on organizations. It reveals how the digital revolution is redefining traditional levels of analysis while at the same time blurring the internal and external boundaries of the organizational environment. It presents a collection of research papers that examine the interaction between Information and Communication Technology (ICT) and behavior from a threefold perspective: First, they analyze individual behavior in terms of specific organizational practices like learning, collaboration and knowledge transfer, as well as the use of ICT within the organization. Second, they explore the dynamics at work on the border between the internal and the external environments by analyzing the organizational impact of ICT usage outside the company, as can be seen in employer branding, consumer behavior and organizational image. Third, they investigate how ICT is being adopted to help face societal challenges outside the company like waste and pollution, smart cities, and e-government. The diversity of views offered makes this book particularly relevant for users, companies, scientists and governments. The content is based on a selection of the best papers – original double-blind peer reviewed contributions –presented at the annual conference of the Italian chapter of AIS, which took place in Rome, Italy, in October 2015, or in other reputable international peer-refereed Information Systems conferences.

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

Regarding online transaction processing (OLTP) workloads, IBM® z SystemsTM platform, with IBM DB2®, data sharing, Workload Manager (WLM), geoplex, and other high-end features, is the widely acknowledged leader. Most customers now integrate business analytics with OLTP by running, for example, scoring functions from transactional context for real-time analytics or by applying machine-learning algorithms on enterprise data that is kept on the mainframe. As a result, IBM adds investment so clients can keep the complete lifecycle for data analysis, modeling, and scoring on z Systems control in a cost-efficient way, keeping the qualities of services in availability, security, reliability that z Systems solutions offer. Because of the changed architecture and tighter integration, IBM has shown, in a customer proof-of-concept, that a particular client was able to achieve an orders-of-magnitude improvement in performance, allowing that client's data scientist to investigate the data in a more interactive process. Open technologies, such as Predictive Model Markup Language (PMML) can help customers update single components instead of being forced to replace everything at once. As a result, you have the possibility to combine your preferred tool for model generation (such as SAS Enterprise Miner or IBM SPSS® Modeler) with a different technology for model scoring (such as Zementis, a company focused on PMML scoring). IBM SPSS Modeler is a leading data mining workbench that can apply various algorithms in data preparation, cleansing, statistics, visualization, machine learning, and predictive analytics. It has over 20 years of experience and continued development, and is integrated with z Systems. With IBM DB2 Analytics Accelerator 5.1 and SPSS Modeler 17.1, the possibility exists to do the complete predictive model creation including data transformation within DB2 Analytics Accelerator. So, instead of moving the data to a distributed environment, algorithms can be pushed to the data, using cost-efficient DB2

Accelerator for the required resource-intensive operations. This IBM Redbooks® publication explains the overall z Systems architecture, how the components can be installed and customized, how the new IBM DB2 Analytics Accelerator loader can help efficient data loading for z Systems data and external data, how in-database transformation, in-database modeling, and in-transactional real-time scoring can be used, and what other related technologies are available. This book is intended for technical specialists and architects, and data scientists who want to use the technology on the z Systems platform. Most of the technologies described in this book require IBM DB2 for z/OS®. For acceleration of the data investigation, data transformation, and data modeling process, DB2 Analytics Accelerator is required. Most value can be achieved if most of the data already resides on z Systems platforms, although adding external data (like from social sources) poses no problem at all.

Whether you are brand new to data mining or working on your tenth predictive analytics project, Commercial Data Mining will be there for you as an accessible reference outlining the entire process and related themes. In this book, you'll learn that your organization does not need a huge volume of data or a Fortune 500 budget to generate business using existing information assets. Expert author David Nettleton guides you through the process from beginning to end and covers everything from business objectives to data sources, and selection to analysis and predictive modeling. Commercial Data Mining includes case studies and practical examples from Nettleton's more than 20 years of commercial experience. Real-world cases covering customer loyalty, cross-selling, and audience prediction in industries including insurance, banking, and media illustrate the concepts and techniques explained throughout the book. Illustrates cost-benefit evaluation of potential projects Includes vendor-agnostic advice on what to look for in off-the-shelf solutions as well as tips on building your own data mining tools Approachable reference can be read from cover to cover by readers of all experience levels Includes practical examples and case studies as well as actionable business insights from author's own experience

The rediscovery of the potential of artificial intelligence (AI) to improve healthcare delivery and patient outcomes has led to an increasing application of AI techniques such as deep learning, computer vision, natural language processing, and robotics in the healthcare domain. Many governments and health authorities have prioritized the application of AI in the delivery of healthcare. Also, technological giants and leading universities have established teams dedicated to the application of AI in medicine. These trends will mean an expanded role for AI in the provision of healthcare. Yet, there is an incomplete understanding of what AI is and its potential for use in healthcare. This book discusses the different types of AI applicable to healthcare and their application in medicine, population health, genomics, healthcare administration, and delivery. Readers, especially healthcare professionals and managers, will find the book useful to understand the different types of AI and how they are relevant to healthcare delivery. The book provides examples of AI being applied in medicine, population health, genomics, healthcare administration, and delivery and how they can commence applying AI in their health services. Researchers and technology professionals will also find the book useful to note current trends in the application of AI in healthcare and initiate their own projects to enable the application of AI in healthcare/medical domains.

- This is the latest practice test to pass the C2090-930 IBM SPSS Modeler Professional v3 Exam. - It contains 60 Questions and Answers. - All the questions are 100% valid and stable. - You can reply on this practice test to pass the exam with a good mark and in the first attempt.

This Special Issue presents the recent advances in sensor technologies for smart homes, including fiber Bragg grating (FBG) sensors for detecting the presence and number of occupants, the Internet of things for monitoring CO_2 concentration, and designing a novel eye-tracking system for monitoring and controlling a smart home, and infrared thermal sensors for fall detection. Such new explorations are pushing the boundary of sensing technologies and, thus, will have more profound implications for the future smart home. Advanced machine learning and data mining algorithms have been proposed to address sensor failure, appliance identification, and human activity recognition in a home environment. These results will enable a promising, sustainable deployment of sensing technologies. A novel multi-agent gamification system is proposed for managing tasks between household members and between families, which demonstrate another dimension of future smart home application. This Special Issue concludes with a review on sensors for human activity recognition. This work paves the roadmap for deploying smart home systems in different socioeconomic contexts. The whole Special Issue has significantly helped to shape our understanding of the strength, implications, and barriers of deploying long-term, sustainable, sensor technologies for smart homes.

Learn the basics of Data Science through an easy to understand conceptual framework and immediately practice using RapidMiner platform. Whether you are brand new to data science or working on your tenth project, this book will show you how to analyze data, uncover hidden patterns and relationships to aid important decisions and predictions. Data Science has become an essential tool to extract value from data for any organization that collects, stores and processes data as part of its operations. This book is ideal for business users, data analysts, business analysts, engineers, and analytics professionals and for anyone who works with data. You'll be able to: Gain the necessary knowledge of different data science techniques to extract value from data. Master the concepts and inner workings of 30 commonly used powerful data science algorithms. Implement step-by-step data science process using using RapidMiner, an open source GUI based data science platform Data Science techniques covered: Exploratory data analysis, Visualization, Decision trees, Rule induction, k-nearest neighbors, Naïve Bayesian classifiers, Artificial neural networks, Deep learning, Support vector machines, Ensemble models, Random forests, Regression, Recommendation engines, Association analysis, K-Means and Density based clustering, Self organizing maps, Text mining, Time series forecasting, Anomaly detection, Feature selection and more... Contains fully updated content on data science, including tactics on how to mine business data for information Presents simple explanations for over twenty powerful data science techniques Enables the practical use of data science algorithms without the need for programming Demonstrates processes with practical use cases Introduces each algorithm or technique and explains the workings of a data science algorithm in plain language Describes the commonly used setup options for the open source tool RapidMiner

Data Science and Analytics for Ordinary People is a collection of blogs I have written on LinkedIn over the past year. As I continue to perform big data analytics, I continue to discover, not only my weaknesses in communicating the information, but new insights into using the information obtained from analytics and communicating it. These are the kinds of things I blog about and are contained herein. Data science and analytics have been used as synonyms on occasion. In reality data science includes data modeling, data mining, data analysis, database architecture and so on. Analytics is what we do to make sense of the data. That is, we take data and turn it into information for business decision makers. This our course implies that we translate our data science jargon into English.

This book gathers the Proceedings of the 20th International Conference on Interactive Collaborative Learning (ICL2017), held in Budapest, Hungary on 27–29 September 2017. The authors are currently witnessing a significant transformation in the development of education. The impact of globalisation on all areas of human life, the exponential acceleration of technological developments and global markets, and the need for flexibility and agility are essential and challenging elements of this process that have to be tackled in general, but especially in engineering education. To face these current real-world challenges, higher education has to find innovative ways to quickly respond to them. Since its inception in 1998, this conference has been devoted to new approaches in learning with a focus on collaborative learning. Today the ICL conferences offer a forum for exchange concerning relevant trends and research results, and for sharing practical experience gained while developing and testing elements of new technologies and pedagogies in the learning context.

Now in its second edition, this textbook introduces readers to the IBM SPSS Modeler and guides them through data mining processes and relevant statistical methods. Focusing on step-by-step tutorials and

well-documented examples that help demystify complex mathematical algorithms and computer programs, it also features a variety of exercises and solutions, as well as an accompanying website with data sets and SPSS Modeler streams. While intended for students, the simplicity of the Modeler makes the book useful for anyone wishing to learn about basic and more advanced data mining, and put this knowledge into practice. This revised and updated second edition includes a new chapter on imbalanced data and resampling techniques as well as an extensive case study on the cross-industry standard process for data mining.

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