The Data Model Resource Vol 1 A Library Of Universal Data Models For All Enterprises

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Enterprise Business Modeling, Optimization Techniques, and Flexible Information Systems Papajorgji, Petraq 2013-04-30 Many factors can impact large-scale enterprise management systems, and maintaining these systems can be a complicated and challenging process. Therefore, businesses can benefit from an assortment of models and management styles to track and collect data for processes. Enterprise Business Modeling, Optimization Techniques, and Flexible Information Systems supplies a wide array of research on the intersections of business modeling, information systems, and optimization techniques. These various business models and structuring methods are proposed to provide ideas, methods, and points of view for managers, practitioners, entrepreneurs, and researchers on how to improve business processes.

Middleware 2008 Valérie Issarny 2008-11-24 This book constitutes the refereed proceedings of the ACM/IFIP/USENIX 9th International Middleware Conference 2008, held in Leuven, Belgium, in December 2008. The 21 revised full papers presented were carefully reviewed and selected from 117 submissions for inclusion in the book. The papers are organized in topical sections on platforms extended to new capabilities, advanced software engineering focusing on specific system properties, system management techniques, as well as components and system algorithms and properties.

The Definitive Guide to DAX Alberto Ferrari 2015-10-14 This comprehensive and authoritative guide will teach you the DAX language for business intelligence, data modeling, and analytics. Leading Microsoft BI consultants Marco Russo and Alberto Ferrari help you master everything from table functions through advanced code and model optimization. You'll learn exactly what happens under the hood when you run a DAX expression, how DAX behaves differently from other languages, and how to use this knowledge to write fast, robust code. If you want to leverage all of DAX's remarkable power and flexibility, this no-compromise "deep dive" is exactly what you need. Perform powerful data analysis with DAX for Microsoft SQL Server Analysis Services, Excel, and Power BI Master core DAX concepts, including calculated columns, measures, and error handling Understand evaluation contexts and the CALCULATE and CALCULATETABLE functions Perform time-based calculations: YTD, MTD, previous year, working days, and more Work with expanded tables, complex functions, and elaborate DAX expressions Perform calculations over hierarchies, including parent/child hierarchies Use DAX to express diverse and unusual relationships Measure DAX query performance with SQL Server Profiler and DAX Studio

Uncertain Archives Nanna Bonde Thylstrup 2021-02-02 Scholars from a range of disciplines interrogate terms relevant to critical studies of big data, from abuse and aggregate to visualization and vulnerability. This pathbreaking work offers an interdisciplinary perspective on big data, interrogating key terms. Scholars from a range of disciplines interrogate concepts relevant to critical studies of big data--arranged glossary style, from abuse and aggregate to visualization and vulnerability--both challenging conventional usage of such often-used terms as prediction and objectivity and introducing such unfamiliar ones as overfitting and copynorm. The contributors include both leading researchers, including N. Katherine Hayles, Johanna Drucker and Lisa Gitelman, and such emerging agenda-setting scholars as Safiya Noble, Sarah T. Roberts and Nicole Starosielski.

Data Model Patterns: A Metadata Map David C. Hay 2010-07-20 Data Model Patterns: A Metadata Map not only presents a conceptual model of a metadata repository but also demonstrates a true enterprise data model of the information technology industry itself. It provides a step-by-step description of the model and is organized so that different readers can benefit from different parts. It offers a view of the world being addressed by all the techniques, methods, and tools of the information processing industry (for example, object-oriented design, CASE, business process re-engineering, etc.) and presents several concepts that need to be addressed by such tools. This book is pertinent, with companies and government agencies realizing that the the data they use represent a significant corporate resource recognize the need to integrate data that has traditionally only been available from disparate sources. An important component of this integration is management of the "metadata" that describe, catalogue, and provide access to the various forms of underlying business data. The "metadata repository" is essential to keep track of the various physical components of these systems and their semantics. The book is ideal for data management professionals, data modeling and design professionals, and data warehouse and database repository designers. A comprehensive work based on the Zachman Framework for information architecture—encompassing the Business Owner's, Architect's, and Designer's views, for all columns (data, activities, locations, people, timing, and motivation) Provides a step-by-step description of model and is organized so that different readers can benefit from different parts Provides a view of the world being addressed by all the techniques, methods and tools of the information processing industry (for example, object-oriented design, CASE, business process re-engineering, etc.) Presents many concepts that are not currently being addressed by such tools — and should be

Forecasting: principles and practice Rob J Hyndman 2018-05-08 Forecasting is required in many situations. Stocking an inventory may require forecasts of demand months in advance. Telecommunication routing requires traffic forecasts a few minutes ahead. Whatever the circumstances or time horizons involved, forecasting is an important aid in effective and efficient planning. This textbook provides a comprehensive introduction to forecasting methods and presents enough information about each method for readers to use them sensibly.

The Behavioral and Social Sciences National Research Council 1988-02-01 This volume explores the scientific frontiers and leading edges of research across the fields of anthropology, economics, political science, psychology, sociology, history, business, education, geography, law, and psychiatry, as well as the newer, more specialized areas of artificial intelligence, child development, cognitive science, communications, demography, linguistics, and management and decision science. It includes recommendations concerning new resources, facilities, and programs that may be needed over the next several years to ensure rapid progress and provide a high level of returns to basic research.

The Data Model Resource Book, Volume 2 Len Silverston 2001-03-21 A quick and reliable way to build proven databases for core business functions Industry experts raved about The Data Model Resource Book when it was first published in March 1997 because it provided a simple, cost-effective way to design databases for core business functions. Len Silverston has now revised and updated the hugely successful First Edition, while adding a companion volume to take care of more specific requirements of different businesses. Each volume is accompanied by a CD-ROM, which is sold separately. Each CD-ROM provides powerful design templates discussed in the books in a ready-to-use electronic format, allowing companies and individuals to develop the databases they need at a fraction of the cost and a third of the time it would take to build them from scratch. With each business function boasting its own directory, this CD-ROM provides a variety of data models for specific implementations in such areas as financial services, insurance, retail, healthcare, universities, and telecom.

Introduction to Algorithms, fourth edition Thomas H. Cormen 2022-04-05 A comprehensive update of the leading algorithms text, with new material on matchings in bipartite graphs, online algorithms, machine learning, and other topics. Some books on algorithms are rigorous but incomplete; others cover masses of material but lack rigor. Introduction to Algorithms uniquely combines rigor and comprehensiveness. It covers a broad range of algorithms in depth, yet makes their design and analysis accessible to all levels of readers, with self-contained chapters and algorithms in pseudocode. Since the publication of the first edition, Introduction to Algorithms has become the leading algorithms text in universities worldwide as well as the standard reference for professionals. This fourth edition has been updated throughout. New for the fourth edition • New chapters on matchings in bipartite graphs, online algorithms, and machine learning • New material on topics including solving recurrence equations, hash tables, potential functions, and suffix arrays • 140 new exercises and 22 new problems • Reader feedback-informed improvements to old problems • Clearer, more personal, and gender-neutral writing style • Color added to improve visual presentation • Notes, bibliography, and index updated to reflect developments in the field • Website with new supplementary material

Fourth IFIP International Conference on Theoretical Computer Science - TCS 2006 Gonzalo Navarro 2006-12-15 The papers contained in this volume were presented at the fourth edition of the IFIP International Conference on Theoretical Computer Science (IFIP TCS), held August 23-24, 2006 in Santiago, Chile. They were selected from 44 pa pers submitted from 17 countries in response to the call for papers. A total of 16 submissions were accepted as full papers, yielding an acceptance rate of about 36%. Papers sohcited for IFIP TCS 2006 were meant to constitute orig inal contributions in two general areas: Algorithms, Complexity and Models of Computation; and Logic, Semantics, Specification and Verification. The conference also included six invited presentations: Marcelo Arenas (P- tificia Universidad Catolica de Chile, Chile), Jozef Gruska (Masaryk University, Czech Republic), Claudio Gutierrez (Universidad de Chile, Chile), Marcos Kiwi (Universidad de Chile, Chile), Nicola Santoro (Carleton University, Canada), and Mihalis Yannakakis (Columbia University, USA). The abstracts of these presentations are included in this volume. In addition, Jozef Gruska and Nicola Santoro accepted our invitation to write full papers related to their talks. Those two surveys are included in the present volume as well. TCS is a biannual conference. The first edition was held in Sendai (Japan, 2000), followed by Montreal (Canada, 2002) and Toulouse (France, 2004).

Data Visualization Kieran Healy 2018-12-18 An accessible primer on how to create effective graphics from data This book provides students and researchers a hands-on introduction to the principles and practice of data visualization. It explains what makes some graphs succeed while others fail, how to make high-quality figures from data using powerful and reproducible methods, and how to think about data visualization in an honest and effective way. Data Visualization builds the reader's expertise in ggplot2, a versatile visualization library for the R programming language. Through a series of worked examples, this accessible primer then demonstrates how to create plots piece by piece, beginning with summaries of single variables and moving on to more complex graphics. Topics include plotting continuous and categorical variables; layering information on graphics; producing effective "small multiple" plots; grouping, summarizing, and transforming data for plotting; creating maps; working with the output of statistical models; and refining plots to make them more comprehensible. Effective graphics are essential to communicating ideas and a great way to better understand data. This book provides the practical skills students and practitioners need to visualize quantitative data and get the most out of their research findings. Provides hands-on instruction using R and ggplot2 Shows how the "tidyverse" of data analysis tools makes working with R easier and more consistent Includes a library of data sets, code, and functions

The Art of Capacity Planning John Allspaw 2008-09-23 Success on the web is measured by usage and growth. Web-based companies live or die by the ability to scale their infrastructure to accommodate increasing demand. This book is a hands-on and practical guide to planning for such growth, with many techniques and considerations to help you plan, deploy, and manage web application infrastructure. The Art of Capacity Planning is written by the manager of data operations for the world-famous photo-sharing site Flickr.com, now owned by Yahoo! John Allspaw combines personal anecdotes from many phases of Flickr's growth with insights from his colleagues in many other industries to give you solid guidelines for measuring your growth, predicting trends, and making cost-effective preparations. Topics include: Evaluating tools for measurement and deployment Capacity analysis and prediction for storage, database, and application servers Designing architectures to easily add and measure capacity Handling sudden spikes Predicting exponential and explosive growth How cloud services such as EC2 can fit into a capacity strategy In this book, Allspaw draws on years of valuable experience, starting from the days when Flickr was relatively small and had to deal with the typical growth pains and cost/performance trade-offs of a typical company with a Web presence. The advice he offers in The Art of Capacity Planning will not only help you prepare for explosive growth, it will save you tons of grief.

Impact Evaluation in Practice, Second Edition Paul J. Gertler 2016-09-12 The second edition of the Impact Evaluation in Practice handbook is a comprehensive and accessible introduction to impact evaluation for policy makers and development practitioners. First published in 2011, it has been used widely across the development and academic communities. The book incorporates real-world examples to present practical guidelines for designing and implementing impact evaluations. Readers will gain an understanding of impact evaluations and the best ways to use them to design evidence-based policies and programs. The updated version covers the newest techniques for evaluating programs and includes state-of-the-art implementation advice, as well as an expanded set of examples and case studies that draw on recent development challenges. It also includes new material on research ethics and partnerships to conduct impact evaluation. The handbook is divided into four sections: Part One discusses what to evaluate and why; Part Two presents the main impact evaluation methods; Part Three addresses how to manage impact evaluations; Part Four reviews impact evaluation sampling and data collection. Case studies illustrate different applications of impact evaluations. The book links to complementary instructional material available online, including an applied case as well as questions and answers. The updated second edition will be a valuable resource for the international development community, universities, and policy makers looking to build better evidence around what works in development.

The Data Model Resource Industry Download Len Silverston 2001-04-01

The Data Model Resource Book, Volume 1 Len Silverston 2011-08-08 A quick and reliable way to build proven databases for core business functions Industry experts raved about The Data Model Resource Book when it was first published in March 1997 because it provided a simple, cost-effective way to design databases for core business functions. Len Silverston has now revised and updated the hugely successful 1st Edition, while adding a companion volume to take care of more specific requirements of different businesses. This updated volume provides a common set of data models for specific core functions shared by most businesses like human resources management, accounting, and project management. These models are standardized and are easily replicated by developers looking for ways to make corporate database development more efficient and cost effective. This guide is the perfect complement to The Data Model Resource CD-ROM, which is sold separately and provides the powerful design templates discussed in the book in a ready-to-use electronic format. A free demonstration CD-ROM is available with each copy of the print book to allow you to try before you buy the full CD-ROM.

Analyzing and Modeling Rank Data John I Marden 2014-01-23 This book is the first single source volume to fully address this prevalent practice in both its analytical and modeling aspects. The information discussed presents the use of data consisting of rankings in such diverse fields as psychology, animal science, educational testing, sociology, economics, and biology. This book systematically presents th

Data Modeling Essentials Graeme Simsion 2004-12-03 Data Modeling Essentials, Third Edition, covers the basics of data modeling while focusing on developing a facility in techniques, rather than a simple familiarization with "the rules". In order to enable students to apply the basics of data modeling to real models, the book addresses the realities of developing systems in real-world situations by assessing the merits of a variety of possible solutions as well as using language and diagramming methods that represent industry practice. This revised edition has been given significantly expanded coverage and reorganized for greater reader comprehension even as it retains its distinctive hallmarks of readability and usefulness. Beginning with the basics, the book provides a thorough grounding in theory before guiding the reader through the various stages of applied data modeling and database design. Later chapters address advanced subjects, including business rules, data warehousing, enterprise-wide modeling and data management. It includes an entirely new section discussing the development of logical and physical modeling, along with new material describing a powerful technique for model verification. It also provides an excellent resource for additional lectures and exercises. This text is the ideal reference for data modelers, data architects, database designers, DBAs, and systems analysts, as well as undergraduate and graduate-level students looking for a real-world perspective. Thorough coverage of the fundamentals and relevant theory. Recognition and support for the creative side of the process. Expanded coverage of applied data modeling includes new chapters on logical and physical database design. New material describing a powerful technique for model verification. Unique coverage of the practical and human aspects of modeling, such as working with business specialists, managing change, and resolving conflict.

Data Model Patterns David Hay 2013-07-18 This is the digital version of the printed book (Copyright © 1996). Learning the basics of a modeling technique is not the same as learning how to use and apply it. To develop a data model of an organization is to gain insights into its nature that do not come easily. Indeed, analysts are often expected to understand subtleties of an organization's structure that may have evaded people who have worked there for years. Here's help for those analysts who have learned the basics of data modeling (or "entity/relationship modeling") but who now need to obtain the insights required to prepare a good model of a real business. Structures common to many types of business are analyzed in areas such as accounting, material requirements planning, process manufacturing, contracts, laboratories, and documents. In each chapter, high-level data models are drawn from the following business areas: The Enterprise and Its World The Things of the Enterprise Procedures and Activities Contracts Accounting The Laboratory Material Requirements Planning Process Manufacturing

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Documents Lower-Level Conventions

Nutritional Cosmetics Aaron Tabor 2009-07-30 Nutritional cosmetics is an emerging area of intense research and marketing and encompasses the concept that orally consumed dietary products can support healthier and more beautiful skin. There are numerous dietary ingredients now being marketed for their potential skin health and beauty benefits and many of these are supported by growing scientific evidence. The purpose of this book is to compile the scientific evidence showing the potential benefits of some of the more extensively researched ingredients. As far as possible, information about the benefits of ingredients consumed orally for skin health is presented. The information contained in this book will help provide insights into an emerging research area and provide scientific background for the potential clinical effectiveness for some of the better researched nutricosmetic ingredients. ABOUT THE EDITORS Aaron Tabor, M.D. is the CEO of Physicians Pharmaceuticals and author of The Revival Slim & Beautiful Diet. A graduate of the Johns Hopkins School of Medicine, Dr. Tabor oversees all clinical research on the Revival Slim & Beautiful Diet plan, conducting randomized, double-blinded, placebo-controlled studies at leading hospitals in the U.S. Areas of note include weight loss, skin/hair/nail appearance, energy, menopause, PMS, cholesterol, memory, and diabetic health. He is also responsible for directing new Revival product development based on clinical research results. Robert M. Blair, Ph.D. is the Research Manager for Physicians Pharmaceuticals, Inc. and manages the daily activities of the Research and Nutrition departments. Dr. Blair received his Ph.D. from Oklahoma State University in the field of Reproductive Physiology. Before joining Physicians Pharmaceuticals, Inc., he worked as an Assistant Professor of Comparative Medicine at the Wake Forest University School of Medicine where he examined the effects of dietary soy on cardiovascular health and cognitive function. Reviews the most-popular and most-researched nutricosmetic ingredients Presents information specifically about the benefits of ingredients consumed orally for skin health Considers the benefits of whey protein, rosemary, soy – and green tea and milk thistle, specifically, for protection against sun damage and photocarcinogenesis Provides information on antioxidants, incl: potential benefits of botanical antioxidants; carotenoids; coenzyme Q10; healthy fruits; olive fruit; and natural enzymes

Deep Learning Ian Goodfellow 2016-11-10 An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives. "Written by three experts in the field, Deep Learning is the only comprehensive book on the subject." —Elon Musk, cochair of OpenAI; cofounder and CEO of Tesla and SpaceX Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning. The text offers mathematical and conceptual background, covering relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models. Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

R for Data Science Hadley Wickham 2016-12-12 Learn how to use R to turn raw data into insight, knowledge, and understanding. This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience, R for Data Science is designed to get you doing data science as quickly as possible. Authors Hadley Wickham and Garrett Grolemund guide you through the steps of importing, wrangling, exploring, and modeling your data and communicating the results. You'll get a complete, big-picture understanding of the data science cycle, along with basic tools you need to manage the details. Each section of the book is paired with exercises to help you practice what you've learned along the way. You'll learn how to: Wrangle—transform your datasets into a form convenient for analysis Program—learn powerful R tools for solving data problems with greater clarity and ease Explore—examine your data, generate hypotheses, and quickly test them Model—provide a low-dimensional summary that captures true "signals" in your dataset Communicate—learn R Markdown for integrating prose, code, and results

Imaging the Word Sharon Iverson Gouwens 1996 This beautiful book, full of stunning artwork from around the world, imaginatively blends lectionary readings with thoughtful and vivid images and writings for each Sunday and celebration of the church year.

Nanostructures and Nanomaterials Guozhong Cao 2011 This text focuses on the synthesis, properties and applications of nanostructures and nanomaterials, particularly inorganic nanomaterials. It provides coverage of the fundamentals and processing techniques with regard to synthesis, properties, characterization and applications of nanostructures and nanomaterials.

Bayesian Data Analysis, Third Edition Andrew Gelman 2013-11-01 Now in its third edition, this classic book is widely considered the leading text on Bayesian methods, lauded for its accessible, practical approach to analyzing data and solving research problems. Bayesian Data Analysis, Third Edition continues to take an applied approach to analysis using up-to-date Bayesian methods. The authors—all leaders in the statistics community—introduce basic concepts from a data-analytic perspective before presenting advanced methods. Throughout the text, numerous worked examples drawn from real applications and research emphasize the use of Bayesian inference in practice. New to the Third Edition Four new chapters on nonparametric modeling Coverage of weakly informative priors and boundary-avoiding priors Updated discussion of cross-validation and predictive information criteria Improved convergence monitoring and effective sample size calculations for iterative simulation Presentations of Hamiltonian Monte Carlo, variational Bayes, and expectation propagation New and revised software code The book can be used in three different ways. For undergraduate students, it introduces Bayesian inference starting from first principles. For graduate students, the text presents effective current approaches to Bayesian modeling and computation in statistics and related fields. For researchers, it provides an assortment of Bayesian methods in applied statistics. Additional materials, including data sets used in the examples, solutions to selected exercises, and software instructions, are available on the book's web page.

The Data Model Toolkit Dave Knifton 2016-10-10 Adopting the latest technological and data related innovations has caused many organisations to realise they don't have a firm grasp on their basic operational data. This is a problem that Logical Data Models are uniquely qualified to help them solve. The realisation of the need to define a Logical Data Model may be driven by any number of reasons including; trying to link Big Data Analytics to operational data, plunging into Digital Marketing, choosing the best SaaS solution, carrying out a core Data Migration, developing a Data Warehouse, enhancing Data Governance processes, or even just trying to get everyone to agree on their Product specifications! This book will provide you with the skills required to start to answer these and many similar types of questions. It is not written with a focus on IT development, so you don't need a technical background to get the most from it. But for any professional working in an organisation's data landscape, this book will provide the skills they need to define high quality and beneficial data models quickly and easily. It does this using a wealth of practical examples, tips and techniques, as well as providing checklists and templates. It is structured into three parts: The Foundations: What are the solid foundations necessary for building effective data models? The Tools: What Tools are required to enable you to specify clear, precise and accurate data model definitions? The Deliverables: What processes will you need to successfully define the models, what will they deliver, and how can we make them beneficial to the organisation? "In this data-rich era, it is even more critical for organisations to answer the question of what their data means and the value it can bring. Those who can, will gain a competitive advantage through their use of data to streamline their operations and energise their strategies. Core to revealing this meaning, is the data model that is now, more than ever, the lynchpin of success. The Data Model Toolkit provides the essential knowledge and skills that will ensure this success." – Reem Zahran, Global IT Platform Director, TNS "We work with many enterprise customers to help them transform their technology and it always starts with data. The key is a clear definition of their data quality, completeness and governance. This book shows you step by step how to define and use Data Models as powerful tools to define an organisation's data and maximise its business benefit." – John Casserly, CEO, Xceed Group

Patterns of Data Modeling Michael Blaha 2010-06-01 Best-selling author and database expert with more than 25 years of experience modeling application and enterprise data, Dr. Michael Blaha provides tried and tested data model patterns, to help readers avoid common modeling mistakes and unnecessary frustration on their way to building effective data models. Unlike the typical methodology book, Patterns of Data Modeling provides advanced techniques for those who have mastered the basics. Recognizing that database representation sets the path for software, determines its flexibility, affects its quality, and influences whether it succeeds or fails, the text focuses on databases rather than programming. It is one of the first books to apply the popular patterns perspective to database systems and data models. It offers practical advice on the core aspects of applications and provides authoritative coverage of mathematical templates, antipatterns, archetypes, identity, canonical models, and relational database design.

The Data Model Resource Book Len Silverston 2009-01-09 This third volume of the best-selling "Data Model Resource Book" series revolutionizes the data modeling discipline by answering the question "How can you save significant time while improving the quality of any type of data modeling effort?" In contrast to the first two volumes, this new volume focuses on the fundamental, underlying patterns that affect over 50 percent of most data modeling efforts. These patterns can be used to considerably reduce modeling time and cost, to jump-start data modeling efforts, as standards and guidelines to increase data model consistency and quality, and as an objective source against which an enterprise can evaluate data models. Praise for The Data Model Resource Book, Volume 3 "Len and Paul look beneath the superficial issues of data modeling and have produced a work that is a must for every serious designer and manager of an IT project." —Bill Inmon, World-renowned expert, speaker, and author on data warehousing and widely recognized as the "father of data warehousing" "The Data Model Resource Book, Volume 3: Universal Patterns for Data Modeling is a great source for reusable patterns you can use to save a tremendous amount of time, effort, and cost on any data modeling effort. Len Silverston and Paul Agnewhave provided an indispensable reference of very high-quality patterns for the most foundational types of datamodel structures. This book represents a revolutionary leap in moving the data modeling profession forward." —Ron Powell, Cofounder and Editorial Director of the Business Intelligence Network "After we model a Customer, Product, or Order, there is still more about each of these that remains to be captured, such as roles they play, classifications in which they belong, or states in which they change. The Data Model Resource Book, Volume 3: Universal Patterns for Data Modeling clearly illustrates these common structures. Len Silverston and Paul Agnew have created a valuable addition to our field, allowing us to improve the consistency and quality of our models by leveraging the many common structures within this text." —Steve Hoberman, Best-Selling Author of Data Modeling Made Simple "The large national health insurance company I work at has actively used these data patterns and the (Universal Data Models) UDM, ahead of this book, through Len Silverston's UDM Jump Start engagement. The patterns have found their way into the core of our Enterprise Information Model, our data warehouse designs, and progressively into key business function databases. We are getting to reuse the patterns across projects and are reaping benefits in understanding, flexibility, and time-to-market. Thanks so much." —David Chasteen, Enterprise Information Architect "Reusing proven data modeling design patterns means exactly that. Data models become stable, but remain very flexible to accommodate changes. We have had the fortune of having Len and Paul share the patterns that are described in this book via our engagements with Universal Data Models, LLC. These data modeling design patterns have helped us to focus on the essential business issues because we have leveraged these reusable building blocks for many of the standard design problems. These design patterns have also helped us to evaluate the quality of data models for their intended purpose. Many times there are a lot of enhancements required. Too often the very specialized business-oriented data model is also implemented physically. This may have significant drawbacks to flexibility. I'm looking forward to increasing the data modeling design pattern competence within Nokia with the help of this book." —Teemu Mattelmaki, Chief Information Architect, Nokia "Once again, Len Silverston, this time together with Paul Agnew, has made a valuable contribution to the body of knowledge about datamodels, and the act of building sound data models. As a professional d

Enterprise Model Patterns David C. Hay 2011-01-01 Here you'll find one key to the development of a successful information system: Clearly capture and communicate both the abstract and concrete building blocks of data that describe your organization. In 1995, David Hay published Data Model Patterns: Conventions of Thought - the groundbreaking book on how to use standard data models to describe the standard business situations. Enterprise Model Patterns: Describing the World builds on the concepts presented there, adds 15 years of practical experience, and presents a more comprehensive view. You will learn how to apply both the abstract and concrete elements of your enterprise's architectural data model through four levels of abstraction: Level 0: An abstract template that underlies the Level 1 model that follows, plus two meta models: • Information Resources. In addition to books, articles, and e-mail notes, it also includes photographs, videos, and sound recordings. • Accounting. Accounting is remarkable because it is itself a modeling language. It takes a very different approach than data modelers in that instead of using entities and entity classes that represent things in the world, it is concerned with accounts that represent bits of value to the organization. Level 1: An enterprise model that is generic enough to apply to any company or government agency, but concrete enough to be readily understood by all. It describes: • People and Organization. Who is involved with the business? People involved are not only the employees within the organization, but customers, agents, and others with whom the organization comes in contact. Organizations of interest include the enterprise itself and its own internal departments, as well as customers, competitors, government agencies, and the like. • Geographic Locations. Where is business conducted? A geographic location may be either a geographic area (defined as any bounded area on the Earth), a geographic point (used to identify a particular location), or, if you are an oil company for example, a geographic solid (such as an oil reserve). • Assets. What tangible items are used to carry out the business? These are any physical things that are manipulated, sometimes as products, but also as the means to producing products and services. • Activities. How is the business carried out? This model not only covers services offered, but also projects and any other kinds of activities. In addition, the model describes the events that cause activities to happen. • Time. All data is positioned in time, but some more than others. Level 2: A more detailed model describing specific functional areas. • Facilities • Human Resources • Communications and Marketing • Contracts • Manufacturing • The Laboratory Level 3: Examples of the details a model can have to address what is truly unique in a particular industry. Here you see how to address the unique bits in areas as diverse as: • Criminal Justice. The model presented here is based on the "Global Justice XML Data Model" (GJXDM). • Microbiology • Banking. The model presented here is the result of working for four different banks and then adding some thought to come up with something different from what is currently in any of them. • Highways. The model here is derived from a project in a Canadian Provincial Highway Department, and addresses the question "what is a road?"

The Data Model Resource Book, Volume 1 Len Silverston 2001-03-21 A quick and reliable way to build proven databases for core business functions Industry experts raved about The Data Model Resource Book when it was first published in March 1997 because it provided a simple, cost-effective way to design databases for core business functions. Len Silverston has now revised and updated the hugely successful 1st Edition, while adding a companion volume to take care of more specific requirements of different businesses. This updated volume provides a common set of data models for specific core functions shared by most businesses like human resources management, accounting, and project management. These models are standardized and are easily replicated by developers looking for ways to make corporate database development more efficient and cost effective. This guide is the perfect complement to The Data Model Resource CD-ROM, which is sold separately and provides the powerful design templates discussed in the book in a ready-to-use electronic format. A free demonstration CD-ROM is available with each copy of the print book to allow you to try before you buy the full CD-ROM.

<u>Sport and Exercise Physiology Testing Guidelines</u> Andrew M. Jones 2016-09-17 Sport and exercise physiologists are called upon to carry out physiological assessments that have proven validity and reliability, both in sport-specific and health-related contexts. A wide variety of test protocols have been developed and refined. This book is a comprehensive guide to these protocols and to the key issues relating to physiological testing. Volume I will cover sport-specific testing, and Volume II clinical and exercise testing. With contributions from many leading specialist physiologists, and covering a wide range of mainstream sports, special populations, and ethical, practical and methodological issues, these volumes represent an essential resource for sport-specific and clinical exercise testing in both research and applied settings. Visit the companion website at: www.routledgesport.com/bases.

<u>Resource Management Information Systems</u> Keith R. McCloy 2005-12-21 Resource Management Information Systems: Remote Sensing, GIS and Modelling, Second Edition provides you with the knowledge and skill necessary to design, build, implement, and operate spatial resource management information systems for the management of physical resources. This volume promotes the use of these technologies in a spatial context, enabling you to apply information systems toward the management of resources in agriculture, forestry, land use planning, valuation, engineering, and many additional fields. A follow-up to the first edition, Resource Management Information Systems: Process and Practice, this book offers extensive revisions, reflecting the rapidly evolving nature of the technologies needed to manage spatial resources.

Analyzing Data with Power BI and Power Pivot for Excel Alberto Ferrari 2017-04-28 Renowned DAX experts Alberto Ferrari and Marco Russo teach you how to design data models for maximum efficiency and effectiveness. How can you use Excel and Power BI to gain real insights into your information? As you examine your data, how do you write a formula that provides the numbers you need? The answers to both of these questions lie with the data model. This book introduces the basic techniques for shaping data models in Excel and Power BI. It's meant for readers who are new to data modeling as well as for experienced data modelers looking for tips from the experts. If you want to use Power BI or Excel to analyze data, the many real-world examples in this book will help you look at your reports in a different way–like experienced data modelers do. As you'll soon see, with the right data model, the correct answer is always a simple one! By reading this book, you will: • Gain an understanding of the basics of data modeling, including tables, relationships, and keys • Familiarize yourself with star schemas, snowflakes, and common modeling techniques • Learn the importance of granularity • Discover how to use multiple fact tables, like sales and purchases, in a complex data model • Manage calendar-related calculations by using date tables • Track historical attributes, like previous addresses of customers or manager assignments • Use snapshots to compute quantity on hand • Work with multiple currencies in the most efficient way • Analyze events that have durations, including overlapping durations • Learn what data model you need to answer your specific business questions About This Book • For Excel and Power BI users who want to exploit the full power of their favorite tools • For BI professionals seeking new ideas for modeling data

The Nimble Elephant John Giles 2012-08-01 "Get it done well and get it done fast" are twin, apparently opposing, demands. Data architects are increasingly expected to deliver quality data models in challenging timeframes, and agile developers are increasingly expected to ensure that their solutions can be easily integrated with the data assets of the overall organization. If you need to deliver quality solutions despite exacting schedules, "The Nimble Elephant" will help by describing proven techniques that leverage the libraries of published data model patterns to rapidly assemble extensible and robust designs. The three sections in the book provide guidelines for applying the lessons to your own situation, so that you can apply the techniques and patterns immediately to your current assignments. The first section, Foundations for Data Agility, addresses some perceived aspects of friction between "data" and "agile" practitioners. As a starting point for resolving the differences, pattern levels of granularity are classified, and their interdependencies exposed. A context of various types of models is established (e.g. conceptual / logical / physical, and industry / enterprise / project), and you will learn how to customize patterns within specific model types. The second section, Steps Towards Data Agility, shares guidelines on generalizing and specializing, with cautions on the dangers of going too far. Creativity in using patterns beyond their intended purpose is encouraged. The short-term "You Ain't Gonna Need It" (YAGNI) philosophy of agile practitioners, and the longer-term strategic perspectives of architects, are compared and evaluated. Consideration is given to the potential of enterprise views contributing to project-specific models. Other topics include industry models, iterative modeling, creation of patterns when none exist, and patterns for rules-in-data. The section ends with a perspective on the modeler's possible role in agile projects, followed by a case study. The final section, A Bridge to the Land of Object Orientation, provides a pathway for re-skilling traditional data modelers who want to expand their options by actively engaging with the ranks of object-oriented developers. I'm delighted to see that John has put his extensive experience and broad knowledge of data modeling into print! John's ability to simplify the complex, and to share his knowledge and enthusiasm – and humor – with colleagues, comes through in this very useful and readable book. I recommend it to anyone working with data. — Monika Remenyi, Senior Data Architect, Telstra John Giles has written a compelling and engaging book about the importance of data modeling patterns in the world of agile computing. His book is clearly and simply written, and it is full of excellent examples drawn from his extensive experience as a practitioner. You will see the enthusiasm and passion that John clearly has for his work in data modeling. And you will see in his book that any interchange with John will always have its fair share of good humor and wisdom! — Professor Ron Weber, Dean, Faculty of IT, Monash University

Health Data in the Information Age Institute of Medicine 1994-01-01 Regional health care databases are being established around the country with the goal of providing timely and useful information to policymakers, physicians, and patients. But their emergence is raising important and sometimes controversial questions about the collection, quality, and appropriate use of health care data. Based on experience with databases now in operation and in development, Health Data in the Information Age provides a clear set of guidelines and principles for exploiting the potential benefits of aggregated health data--without jeopardizing confidentiality. A panel of experts identifies characteristics of emerging health database organizations (HDOs). The committee explores how HDOs can maintain the quality of their data, what policies and practices they should adopt, how they can prepare for linkages with computer-based patient records, and how diverse groups from researchers to health care administrators might use aggregated data. Health Data in the Information Age offers frank analysis and guidelines that will be invaluable to anyone interested in the operation of health care databases.

Data Science for Business Foster Provost 2013-07-27 Written by renowned data science experts Foster Provost and Tom Fawcett, Data Science for Business introduces the fundamental principles of data science, and walks you through the "data-analytic thinking" necessary for extracting useful knowledge and business value from the data you collect. This guide also helps you understand the many data-mining techniques in use today. Based on an MBA course Provost has taught at New York University over the past ten years, Data Science for Business provides examples of real-world business problems to illustrate these principles. You'll not only learn how to improve communication between business stakeholders and data scientists, but also how participate intelligently in your company's data science projects. You'll also discover how to think data-analytically, and fully appreciate how data science methods can support business decision-making. Understand how data science fits in your organization—and how you can use it for competitive advantage Treat data as a business asset that requires careful investment if you're to gain real value Approach business problems data-analytically, using the data-mining process to gather good data in the most appropriate way Learn general concepts for actually extracting knowledge from data Apply data science principles when interviewing data science job candidates

<u>Site Reliability Engineering</u> Niall Richard Murphy 2016-03-23 The overwhelming majority of a software system's lifespan is spent in use, not in design or implementation. So, why does conventional wisdom insist that software engineers focus primarily on the design and development of large-scale computing systems? In this collection of essays and articles, key members of Google's Site Reliability Team explain how and why their commitment to the entire lifecycle has enabled the company to successfully build, deploy, monitor, and maintain some of the largest software systems in the world. You'll learn the principles and practices that enable Google engineers to make systems more scalable, reliable, and efficient—lessons directly applicable to your organization. This book is divided into four sections: Introduction—Learn what site reliability engineering is and why it differs from conventional IT industry practices Principles—Examine the patterns, behaviors, and areas of concern that influence the work of a site reliability engineer (SRE) Practices—Understand the theory and practice of an SRE's day-to-day work: building and operating large distributed computing systems Management—Explore Google's best practices for training, communication, and meetings that your organization can use

The Data Model Resource CD Len Silverston 1997-02-21 The Data Model Resource Book arms you with a set of proven data models and data warehouse designs for the core functions shared by most businesses. You get a comprehensive set of detailed models for marketing and sales, human resources, inventory, professional services, order processing, billing, product delivery, work order management, budgeting, accounting, and more. The authors also show you how to quickly convert the logical data models into enterprise-wide data warehouses as well as data marts.

Speech & Language Processing Dan Jurafsky 2000-09

The World Book Encyclopedia 2002 An encyclopedia designed especially to meet the needs of elementary, junior high, and senior high school students.

Data Modeling Made Simple Steve Hoberman 2015-12-29 Data Modeling Made Simple will provide the business or IT professional with a practical working knowledge of data modeling concepts and best practices. This book is written in a conversational style that encourages you to read it from start to finish and master these ten objectives: Know when a data model is needed and which type of data model is most effective for each situation Read a data model of any size and complexity with the same confidence as reading a book Build a fully normalized relational data model, as well as an easily navigatable dimensional model Apply techniques to turn a logical data model into an efficient physical design Leverage several templates to make requirements gathering more efficient and accurate Explain all ten categories of the Data Model Scorecard Learn strategies to improve your working relationships with others Appreciate the impact unstructured data has, and will have, on our data modeling deliverables Learn basic UML concepts Put data modeling in context with XML, metadata, and agile development Book Review by Johnny Gay In this book review, I address each section in the book and provide what I found most valuable as a data modeler. I compare, as I go, how the book's structure eases the new data modeler into the subject much like an instructor might ease a beginning swimmer into the pool. This book begins like a Dan Brown novel. It even starts out with the protagonist, our favorite data modeler, lost on a dark road somewhere in France. In this case, what saves him isn't a cipher, but of all things, something that's very much like a data model in the form of a map! The author deems they are both way-finding tools. The chapters in the book are divided into 5 sections. The chapters in each section end with an exercise and a list of the key points covered to reinforce what you've learned. I find myself comparing the teaching structure of the book to the way most of us learn to swim.