PRINCIPLES OF MULTIMEDIA DATABASE SYSTEMS THE MORGAN KAUFMANN SERIES IN DATA MANAGEMENT SYSTEMS

Principles of Multimedia Database Systems

Until recently, databases contained easily indexed numbers and text. Today, in the age of powerful, graphically based computers, and the world wide web, databases are likely to contain a much greater variety of data forms, including images, sound, video clips, and even handwritten documents. When multimedia databases are the norm, traditional methods of working with databases no longer apply. How do you query a video library, or an image database containing x-rays, or sounds in an audio database? Principles of Multimedia Database Systems explains how to work with these new multimedia data forms. It is the first comprehensive treatment of the skills and techniques required to build, maintain, and query multimedia databases. This book presents the mix of techniques necessary for working with multimedia databases, including synthetic solutions for the design and deployment of multimedia database systems. Because rapid technological developments are constantly changing the landscape of multimedia databases, the book teaches basic theoretical principles applicable to any database. * Covers the major issues of multimedia database design, with a strong focus on distributed multimedia databases. * Discusses important topics including how to organize the vast data types, storage and retrieval, and creation and delivery of multimedia presentations. * Organized around the lively scenario of a crime-fighting database that evolves as new concepts are introduced. * Includes numerous exercises and suggestions for programming projects. * Additional materials on the web include updates, on-line supplements, and links to downloadable software.

Morgan Kaufmann series in data management systems

This text represents a breakthrough in the process underlying the design of the increasingly common and important data-driven Web applications.

Managing Reference Data in Enterprise Databases

\"This is a great book! I have to admit I wasn't enthusiastic about the idea of a book with such a narrow topic initially, but, frankly, it's the first professional book I've read page to page in one sitting in a long time. It should be of interest to DBAs, data architects and modelers, programmers who have to write database programs, and yes, even managers. This book is a winner.\" - Karen Watterson, Editor SQL Server Professional \"Malcolm Chisholm has produced a very readable book. It is well-written and with excellent examples. It will, I am sure, become the Reference Book on Reference Data.\" - Clive Finkelstein, \"Father\" of Information Engineering, Managing Director, Information Engineering Services Pty Ltd Reference data plays a key role in your business databases and must be free from defects of any kind. So why is it so hard to find information on this critical topic? Recognizing the dangers of taking reference data for granted, Managing Reference Data in Enterprise Databases gives you precisely what you've been seeking: A complete guide to the implementation and management of reference data of all kinds. This book begins with a thorough definition of reference data, then proceeds with a detailed examination of all reference data issues, fully describing uses, common difficulties, and practical solutions. Whether you're a database manager, architect, administrator, programmer, or analyst, be sure to keep this easy-to-use reference close at hand. Features Solves special challenges associated with maintaining reference data. Addresses a wide range of reference data issues, including acronyms, redundancy, mapping, life cycles, multiple languages, and

querying. Describes how reference data interacts with other system components, what problems can arise, and how to mitigate these problems. Offers examples of standard reference data types and matrices for evaluating management methods. Provides a number of standard reference data tables and more specialized material to help you deal with reference data, via a companion Web site

XML-Based Data Management and Multimedia Engineering - EDBT 2002 Workshops

This volume comprises papers from the following three workshops that were part of the complete program for the International Conference on Extending Database Technology (EDBT) held in Prague, Czech Republic, in March 2002: XML-Based Data Management (XMLDM) Second International Workshop on Multimedia Data and Document Engineering (MDDE) Young Researchers Workshop (YRWS) Together, the three workshops featured 48 high-quality papers selected from approximately 130 submissions. It was, therefore, difficult to decide on the papers that were to be accepted for presentation. We believe that the accepted papers substantially contribute to their particular fields of research. The workshops were an excellent basis for intense and highly fruitful discussions. The quality and quantity of papers show that the areas of interest for the workshops are highly active. A large number of excellent researchers are working in relevant fields producing research output that is not only of interest to other researchers but also for industry. The organizers and participants of the workshops were highly satisfied with the output. The high quality of the presenters and workshop participants contributed to the success of each workshop. The amazing environment of Prague and the location of the EDBT conference also contributed to the overall success. Last, but not least, our sincere thanks to the conference organizers – the organizing team was always willing to help and if there were things that did not work, assistance was quickly available.

Management of Heterogeneous and Autonomous Database Systems

An Overview of Multidatabase Systems: Past and Present / Athman Bouguettaya, Boualem Benatallah, Ahmed Elmagarmid / - Local Autonomy and Its Effects on Multidatabase Systems / Ahmed Elmagarmid, Weimin Du, Rafi Ahmed / - Semantic Similarities Between Objects in Multiple Databases / Vipul Kashyap, Amit Sheth / - Resolution of Representational Diversity in Multidatabase Systems / Joachim Hammer, Dennis McLeod / - Schema Integration: Past, Present, and Future / Sudha Ram, V. Ramesh / - Schema and Language Translation / Bogdan Czejdo, Le Gruenwald / - Multidatabase Languages / Paolo Missier, Marek Rusinkiewicz, W. Jin / - Interdependent Database Systems / George Karabatis, Marek Rusinkiewicz, Amit Sheth / - Correctness Criteria and Concurrency Control / Panos K. Chrysanthis, Krithi Ramamritham / - Transaction Management in Multidatabase Systems: Current Technologies and Formalisms / Ken Barker, Ahmed Elmagarmid / - Transaction-Based Recovery / Jari Veijalainen. ...

Software Prototyping in Data and Knowledge Engineering

This monograph describes an innovative prototyping framework for data and knowledge intensive systems. The proposed approach will prove especially useful for advanced and research-oriented projects that aim to develop a traditional database perspective into fully-fledged advanced database approaches and knowledge engineering technologies. The book is organised in two parts. The first part, comprising chapters 1 to 4, provides an introduction to the concept of prototyping, to database and knowledge-based technologies, and to the main issues involved in the integration of data and knowledge engineering. The second part, comprising chapters 5 to 12, illustrates the proposed approach in technical detail. Audience: This volume will be of interest to researchers in the field of databases and knowledge engineering in general, and for software designers and knowledge engineers who aim to expand their expertise in data and knowledge intensive systems.

Managing and Mining Multimedia Databases

There is now so much data on the Web that managing it with conventional tools is becoming almost

impossible. To manage this data, provide interoperability and warehousing between multiple data sources and systems, and extract information from the databases and warehouses, various tools are being developed. In fact, developments in multimedia database management have exploded during the past decade. To date, however, there has been little information available on providing a complete set of services for multimedia databases, including their management, mining, and integration on the Web for electronic enterprises. Managing and Mining Multimedia Databases fills that gap. Focusing on managing and mining multimedia databases for electronic commerce and business, it explores database management system techniques for text, image, audio, and video databases. It addresses the issues and challenges of mining multimedia databases to extract information, and discusses the directions and challenges related to integrating multimedia databases for the Web, particularly for e-business. This book provides a comprehensive overview of multimedia data management and mining technologies, from the underlying concepts, architectures, and data models for multimedia database systems to the technologies that support multimedia data management on the Web, privacy issues, and emerging standards, prototypes, and products. Designed for technical managers, executives, and technologists, it offers your only opportunity to learn about both multimedia data management and multimedia data mining within a single book.

Joe Celko's Data and Databases

This text covers basic database concepts to provide a conceptual understanding of data and databases necessary for database design and development.

Data Mining

This book offers a thorough grounding in machine learning concepts combined with practical advice on applying machine learning tools and techniques in real-world data mining situations. Clearly written and effectively illustrated, this book is ideal for anyone involved at any level in the work of extracting usable knowledge from large collections of data. Complementing the book's instruction is fully functional machine learning software.

Joe Celko's SQL for Smarties

An industry consultant shares his most useful tips and tricks for advanced SQL programming to help the working programmer gain performance and work around system deficiencies.

Data Model Patterns: A Metadata Map

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 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

Multimedia Database Systems

Multimedia Database Systems: Design and Implementation Strategies is a compendium of the state-of-the-art research and development work pertaining to the problems and issues in the design and development of multimedia database systems. The chapters in the book are developed from presentations given at previous meetings of the International Workshop on Multi-Media Data Base Management Systems (IW-MMDBMS), and address the following issues: development of adequate multimedia database models, design of multimedia database query and retrieval languages, design of indexing and organization techniques, development of efficient and reliable storage models, development of efficient and dependable retrieval and delivery strategies, and development of flexible, adaptive, and reliable presentation techniques.

A Complete Guide to DB2 Universal Database

This is a guide designed to familiarize users with the DB2 standard while helping to optimize their use of the technology

SQL: 1999

SQL: 1999 is the best way to make the leap from SQL-92 to SQL:1999, but it is much more than just a simple bridge between the two. The latest from celebrated SQL experts Jim Melton and Alan Simon, SQL:1999 is a comprehensive, eminently practical account of SQL's latest incarnation and a potent distillation of the details required to put it to work. Written to accommodate both novice and experienced SQL users, SQL:1999 focuses on the language's capabilities, from the basic to the advanced, and the ways that real applications take advantage of them. Throughout, the authors illustrate features and techniques with clear and often entertaining references to their own custom database. Gives authoritative coverage from an expert team that includes the editor of the SQL-92 and SQL:1999 standards. Provides a general introduction to SQL that helps you understand its constituent parts, history, and place in the realm of computer languages. Explains SQL:1999's more sophisticated features, including advanced value expressions, predicates, advanced SQL query expressions, and support for active databases. Explores key issues for programmers linking applications to SQL databases. Provides guidance on troubleshooting, internationalization, and changes anticipated in the next version of SQL. Contains appendices devoted to database design, a complete SQL:1999 example, the standardization process, and more.

Understanding SQL and Java Together

Annotation With the growth of Java and the rise of database-powered Web applications, the need to use Java with SQL is clear. Until now, authoritative coverage of the techniques available to meet these challenges and reap their benefits-both programming and career benefits-didn't exist. Understanding SQL and Java Together examines all the standards for combining SQL and Java. It shows you exactly how to use their features to write efficient and effective code supporting Java access to SQL data in a variety of ways. You'll gain a thorough understanding of the relationship between SQL and Java, which will allow you to write static and dynamic SQL programs in Java, merge Java code with SQL databases and SQL code, and use other data management techniques wherever appropriate. * Covers all the technologies for using SQL and Java together, including JDBC, Java Blend, and SQLJ Parts 0, 1, and 2 * Explains how to embed SQL code in Java and take advantage of Java's ability to compile that code for aspecific DBMS * Explains how to store and invoke Java routines in an SQL database-and how to store Java objects in an SQL database for seamless interchange among application layers * Covers dynamic SQL access techniques using JDBC and advantageous ways to combine static and dynamic SQL * Comes with a CD-ROM containing Oracle's

JDeveloper, Sybase's Adaptive Server Anywhere, Informix's Cloudscape, the complete database schema, and the complete text of most of the examples.

Advanced SQL:1999

This guide documents SQL: 1999Us advanced features in the same practical, \"programmercentric\" way that the first volume documented the language's basic features. This is no mere representation of the standard, but rather authoritative guidance on making an application conform to it, both formally and effectively.

Information Visualization in Data Mining and Knowledge Discovery

This text surveys research from the fields of data mining and information visualisation and presents a case for techniques by which information visualisation can be used to uncover real knowledge hidden away in large databases.

Database Modeling with Microsoft® Visio for Enterprise Architects

There is no other manual for the over 200,000 database administrators using Visio.

The Object Data Standard

ODMG is a widely accepted standard for object database modelling; every year more companies implement it. ODMG 3.0 integrates programming languages with databases and ensures the portability of applications across platforms and DBMS products.

Principles of Database Systems

Joe Celko has looked deep into the code of SQL programmers and found a consistent and troubling pattern - a frightening lack of consistency between their individual encoding schemes and those of the industries in which they operate. This translates into a series of incompatible databases, each one an island unto itself that is unable to share information with others in an age of internationalization and business interdependence. Such incompatibility severely hinders information flow and the quality of company data. Data, Measurements and Standards in SQL reveals the shift these programmers need to make to overcome this deadlock. By collecting and detailing the diverse standards of myriad industries, and then giving a declaration for the units that can be used in an SQL schema, Celko enables readers to write and implement portable data that can interface to any number of external application systems! This book doesn't limit itself to one subject, but serves as a detailed synopsis of measurement scales and data standards for all industries, thereby giving RDBMS programmers and designers the knowledge and know-how they need to communicate effectively across business boundaries. * Collects and details the diverse data standards of myriad industries under one cover, thereby creating a definitive, one-stop-shopping opportunity for database programmers. * Enables readers to write and implement portable data that can interface to any number external application systems, allowing readers to cross business boundaries and move up the career ladder. * Expert advice from one of the most-read SQL authors in the world who is well known for his ten years of service on the ANSI SQL standards committee and Readers Choice Award winning column in Intelligent Enterprise.

Joe Celko's Data, Measurements and Standards in SQL

This work has been revised and updated to provide a comprehensive treatment of database design for commercial database products and their applications. The book covers the basic foundation of design as well as more advanced techniques, and also incorporates coverage of data warehousing and OLAP (On-Line

Analytical Processing), data mining, object-relational, multimedia, and temporal/spatial design.

Database Modeling and Design

Multimedia services involve processing, transmission and retrieval of multiple forms of information. Multimedia services have gained momentum in the past few years due to the easy availability of computing power and storage media. Societyisdemandinghuman-likeintelligentbehaviour,suchasadaptationand generalization, from machines every day. With this view in mind, researchers are working on fusing intelligent paradigms such as arti?cial neural networks, swarm intelligence, arti?cial immune systems, evolutionary computing and multiagents with multimedia services. Arti?cial neural networks use neurons, interconnected using various schemes, for fusing learning in multimedia-based systems. Evolutionary c- puting techniques are used in tasks such as optimization. Typical multiagent systems are based on Belief-Desire-Intention model and act on behalf of the users. Typical examples of intelligent multimedia services include digital - braries, e-learning and teaching, e-government, e-commerce, e-entertainment, e-health and e-legal services. This book includes 15 chapters on advanced tools and methodologies pertaining to the multimedia services. The authors and reviewers have c- tributed immensely to this research-oriented book. We believe that this - search volume will be valuable to professors, researchers and students of all disciplines, such as computer science, engineering and management. We express our sincere thanks to Springer-Verlag for their wonderful e- torial support.

Multimedia Services in Intelligent Environments

Component Database Systems is a collection of invited chapters by the researchers making the most influential contributions in the database industry's trend toward componentization This book represents the sometimes-divergent, sometimes-convergent approaches taken by leading database vendors as they seek to establish commercially viable componentization strategies. Together, these contributions form the first book devoted entirely to the technical and architectural design of component-based database systems. In addition to detailing the current state of their research, the authors also take up many of the issues affecting the likely future directions of component databases. If you have a stake in the evolution of any of today's leading database systems, this book will make fascinating reading. It will also help prepare you for the technology that is likely to become widely available over the next several years. * Is comprised of contributions from the field's most highly respected researchers, including key figures at IBM, Oracle, Informix, Microsoft, and POET. * Represents the entire spectrum of approaches taken by leading software companies working on DBMS componentization strategies. * Covers component-focused architectures, methods for hooking components into an overall system, and support for component development. * Examines the component technologies that are most valuable to Web-based and multimedia databases. * Presents a thorough classification and overview of component database systems.

Component Database Systems

Publisher Description

Foundations of Multidimensional and Metric Data Structures

Perfectly intelligent programmers often struggle when forced to work with SQL. Why? Joe Celko believes the problem lies with their procedural programming mindset, which keeps them from taking full advantage of the power of declarative languages. The result is overly complex and inefficient code, not to mention lost productivity. This book will change the way you think about the problems you solve with SQL programs.. Focusing on three key table-based techniques, Celko reveals their power through detailed examples and clear explanations. As you master these techniques, you'll find you are able to conceptualize problems as rooted in sets and solvable through declarative programming. Before long, you'll be coding more quickly, writing more efficient code, and applying the full power of SQL • Filled with the insights of one of the world's

leading SQL authorities - noted for his knowledge and his ability to teach what he knows. • Focuses on auxiliary tables (for computing functions and other values by joins), temporal tables (for temporal queries, historical data, and audit information), and virtual tables (for improved performance). • Presents clear guidance for selecting and correctly applying the right table technique.

Joe Celko's Thinking in Sets: Auxiliary, Temporal, and Virtual Tables in SQL

The Handbook provides practitioners, scientists and graduate students with a good overview of basic notions, methods and techniques, as well as important issues and trends across the broad spectrum of data management. In particular, the book covers fundamental topics in the field such as distributed databases, parallel databases, advanced databases, object-oriented databases, advanced transaction management, workflow management, data warehousing, data mining, mobile computing, data integration and the Web. Summing up, the Handbook is a valuable source of information for academics and practitioners who are interested in learning the key ideas in the considered area.

Handbook on Data Management in Information Systems

XML has become the lingua franca for representing business data, for exchanging information between business partners and applications, and for adding structure– and sometimes meaning—to text-based documents. XML offers some special challenges and opportunities in the area of search: querying XML can produce very precise, fine-grained results, if you know how to express and execute those queries. For software developers and systems architects: this book teaches the most useful approaches to querying XML documents and repositories. This book will also help managers and project leaders grasp how “querying XML fits into the larger context of querying and XML. Querying XML provides a comprehensive background from fundamental concepts (What is XML?) to data models (the Infoset, PSVI, XQuery Data Model), to APIs (querying XML from SQL or Java) and more. * Presents the concepts clearly, and demonstrates them with illustrations and examples; offers a thorough mastery of the subject area in a single book. * Provides comprehensive coverage of XML query languages, and the concepts needed to understand them completely (such as the XQuery Data Model). * Shows how to query XML documents and data using: XPath (the XML Path Language); XQuery, soon to be the new W3C Recommendation for querying XML; XQuery's companion XQueryX; and SQL, featuring the SQL/XML * Includes an extensive set of XQuery, XPath, SQL, Java, and other examples, with links to downloadable code and data samples.

Querying XML

Land and water management is especially critical as the use of upstream watersheds can drastically affect large numbers of people living in downstream watersheds. This work examines the institutional and technical context for managing watersheds and river basins, including the involvement of both the public and private sectors.

Integrated Watershed Management

This book provides comprehensive coverage of fundamentals of database management system. It contains a detailed description on Relational Database Management System Concepts. There are a variety of solved examples and review questions with solutions. This book is for those who require a better understanding of relational data modeling, its purpose, its nature, and the standards used in creating relational data model.

Fundamentals of Relational Database Management Systems

This book provides an integrated view of the five kinds of enabling technologies in terms of knowledge media architectures: multimedia and hypermedia, object-oriented GUI and visual programming, reusable

component software and component integration, network publishing and electronic commerce, and object-oriented and multimedia databases. Among many books on multimedia and hypermedia, few address knowledge. Of those that do, none focus on media for the editing, distribution, and management of knowledge the way this book does. It is written based on the hypothesis that knowledge media work as genes, with their network publishing repository, working as a gene pool to accelerate the evolution of knowledge shared in our societies.

Meme Media and Meme Market Architectures

Multimedia and its rich semantics are profligate in today\u0092s digital environment. Databases and content management systems serve as essential tools to ensure that the endless supply of multimedia content are indexed and remain accessible to end users. Methods and Innovations for Multimedia Database Content Management highlights original research on new theories, algorithms, technologies, system design, and implementation in multimedia data engineering and management with an emphasis on automatic indexing, tagging, high-order ranking, and rule mining. This book is an ideal resource for university researchers, scientists, industry professionals, software engineers and graduate students.

Methods and Innovations for Multimedia Database Content Management

A thorough presentation of query processing techniques in a broad range of database systems for advanced applications. Provides the most effective query processing techniques and ways to optimize the information retrieval process. Intended for database systems designers creating advanced applications.

Principles of Database Query Processing for Advanced Applications

Multimedia Database Management Systems presents the issues and the techniques used in building multimedia database management systems. Chapter 1 provides an overview of multimedia databases and underlines the new requirements for these applications. Chapter 2 discusses the techniques used for storing and retrieving multimedia objects. Chapter 3 presents the techniques used for generating metadata for various media objects. Chapter 4 examines the mechanisms used for storing the index information needed for accessing different media objects. Chapter 5 analyzes the approaches for modeling media objects, both their temporal and spatial characteristics. Object-oriented approach, with some additional features, has been widely used to model multimedia information. The book discusses two systems that use object-oriented models: OVID (Object Video Information Database) and Jasmine. The models for representing temporal and spatial requirements of media objects are then studied. The book also describes authoring techniques used for specifying temporal and spatial characteristics of multimedia databases. Chapter 6 explains different types of multimedia queries, the methodologies for processing them and the language features for describing them. The features offered by query languages such as SQL/MM (Structured Query Language for Multimedia), PICQUERY+, and Video SQL are also studied. Chapter 7 deals with the communication requirements for multimedia databases. A client accessing multimedia data over computer networks needs to identify a schedule for retrieving various media objects composing the database. The book identifies possible ways for generating a retrieval schedule. Chapter 8 ties together the techniques discussed in the previous chapters by providing a simple architecture of a distributed multimedia database management system. Multimedia Database Management Systems can be used as a text for graduate students and researchers working in the area of multimedia databases. In addition, the book serves as essential reading material for computer professionals who are in (or moving to) the area of multimedia databases.

Multimedia Database Management Systems

This year marked the coming of age of the British National Conference on Databases with its 21st conference held at Heriot-Watt University, Edinburgh, in July 2004. To mark the occasion the general theme of the conference was “When Data Is Key”, reflecting not only the traditional key awarded on a 21st birthday, but

also the ev- growing importance of electronic data management in every aspect of our modern lives. The conference was run as part of DAMMS (Data Analysis, Manipulation, Management and Storage) Week, which included a number of co-located and complementary conferences and workshops, including the 2nd Workshop on Teaching, Learning and Assessment in Databases (TLAD2), the BNCOD BioInformatics Workshop, and the 1st International Conference on the Future of Consumer Insight Developments in Retail Banking. The aim of this co-location was to develop synergies between the teaching, research and commercial communities involved in all aspects of database activities, and to use BNCOD as a focus for future synergies and developments within these communities. Although this is entitled the British National Conference on Databases, BNCOD has always had an international focus, and this year more than most, with the majority of the papers submitted and accepted coming from outwith the UK.

Key Technologies for Data Management

Textbook on principles of computer data base management - covers data organization, data base software, (incl. Languages), data protection, confidentiality and privacy, information quality, management information systems, technical aspects, etc. Bibliography pp. 341 to 344, diagrams, flow charts and glossary.

Principles of Data-base Management

Data Mining: Concepts and Techniques provides the concepts and techniques in processing gathered data or information, which will be used in various applications. Specifically, it explains data mining and the tools used in discovering knowledge from the collected data. This book is referred as the knowledge discovery from data (KDD). It focuses on the feasibility, usefulness, effectiveness, and scalability of techniques of large data sets. After describing data mining, this edition explains the methods of knowing, preprocessing, processing, and warehousing data. It then presents information about data warehouses, online analytical processing (OLAP), and data cube technology. Then, the methods involved in mining frequent patterns, associations, and correlations for large data sets are described. The book details the methods for data classification and introduces the concepts and methods for data clustering. The remaining chapters discuss the outlier detection and the trends, applications, and research frontiers in data mining. This book is intended for Computer Science students, application developers, business professionals, and researchers who seek information on data mining. Presents dozens of algorithms and implementation examples, all in pseudo-code and suitable for use in real-world, large-scale data mining projects Addresses advanced topics such as mining object-relational databases, spatial databases, multimedia databases, time-series databases, text databases, the World Wide Web, and applications in several fields Provides a comprehensive, practical look at the concepts and techniques you need to get the most out of your data

Data Mining: Concepts and Techniques

The rapidly increasing volume of information contained in relational databases places a strain on databases, performance, and maintainability: DBAs are under greater pressure than ever to optimize database structure for system performance and administration. Physical Database Design discusses the concept of how physical structures of databases affect performance, including specific examples, guidelines, and best and worst practices for a variety of DBMSs and configurations. Something as simple as improving the table index design has a profound impact on performance. Every form of relational database, such as Online Transaction Processing (OLTP), Enterprise Resource Management (ERP), Data Mining (DM), or Management Resource Planning (MRP), can be improved using the methods provided in the book. The first complete treatment on physical database design, written by the authors of the seminal, Database Modeling and Design: Logical Design, Fourth Edition Includes an introduction to the major concepts of physical database design as well as detailed examples, using methodologies and tools most popular for relational databases today: Oracle, DB2 (IBM), and SQL Server (Microsoft) Focuses on physical database design for exploiting B+tree indexing, clustered indexes, multidimensional clustering (MDC), range partitioning, shared nothing partitioning, shared disk data placement, materialized views, bitmap indexes, automated design tools, and more!

Physical Database Design

Are you a data mining analyst, who spends up to 80% of your time assuring data quality, then preparing that data for developing and deploying predictive models? And do you find lots of literature on data mining theory and concepts, but when it comes to practical advice on developing good mining views find little “how to information? And are you, like most analysts, preparing the data in SAS? This book is intended to fill this gap as your source of practical recipes. It introduces a framework for the process of data preparation for data mining, and presents the detailed implementation of each step in SAS. In addition, business applications of data mining modeling require you to deal with a large number of variables, typically hundreds if not thousands. Therefore, the book devotes several chapters to the methods of data transformation and variable selection. A complete framework for the data preparation process, including implementation details for each step. The complete SAS implementation code, which is readily usable by professional analysts and data miners. A unique and comprehensive approach for the treatment of missing values, optimal binning, and cardinality reduction. Assumes minimal proficiency in SAS and includes a quick-start chapter on writing SAS macros.

Data Preparation for Data Mining Using SAS

Whether you are a software developer, systems architect, data analyst, or business analyst, if you want to take advantage of data mining in the development of advanced analytic applications, Java Data Mining, JDM, the new standard now implemented in core DBMS and data mining/analysis software, is a key solution component. This book is the essential guide to the usage of the JDM standard interface, written by contributors to the JDM standard. Data mining introduction - an overview of data mining and the problems it can address across industries; JDM's place in strategic solutions to data mining-related problems JDM essentials - concepts, design approach and design issues, with detailed code examples in Java; a Web Services interface to enable JDM functionality in an SOA environment; and illustration of JDM XML Schema for JDM objects JDM in practice - the use of JDM from vendor implementations and approaches to customer applications, integration, and usage; impact of data mining on IT infrastructure; a how-to guide for building applications that use the JDM API Free, downloadable KJDM source code referenced in the book available here

Java Data Mining: Strategy, Standard, and Practice