

## The Art Of Sql Stephane Faroult

The Art of SQL"O'Reilly Media, Inc."

Effective SQL brings together the hands-on solutions and practical insights you need to solve a wide range of complex problems with SQL, and to design databases that make it far easier to manage data in the future.

Leveraging the proven format of the best-selling Effective series, it focuses on providing clear, practical explanations, expert tips, and plenty of realistic examples -- all in full color. Drawing on their immense experience as consultants and instructors, three world-class database experts identify specific challenges, and distill each solution into five pages or less. Throughout, they provide well-annotated SQL code designed for all leading platforms, as well as code for specific implementations ranging from SQL Server to Oracle and MySQL, wherever these vary or permit you to achieve your goal more efficiently. Going beyond mere syntax, the authors also show how to avoid poor database design that makes it difficult to write effective SQL, how to improve suboptimal designs, and how to work around designs you can't change. You'll also find detailed sections on filtering and finding data, aggregation, subqueries, and metadata, as well as specific solutions for everything from listing products to scheduling events and defining data hierarchies. Simply put, if you already know the basics of SQL, Effective SQL will help you become a world-class SQL problem-solver.

Offers tips for improving the performance of any SQL database, no matter what the platform. Written for

experienced database administrators familiar with SQL, the book identifies the similarities and differences of eight DBMSs, including Oracle 9i, IBM DB2 7.2, and Microsoft SQL server 2000. It provides strategies for refining sorts, subqueries, columns, tables, indexes, constraints, and locks. Annotation copyrighted by Book News, Inc., Portland, OR

Most books on databases have the size and content of a book of magic written in the ancient language of Tolkien's Ents. To counter this trend, Introduction to Database Systems is small and concise by design. It aims to provide students, academics and professionals with a rigorous, convenient and economical reference. The book describes the essential concepts pertaining to the design and programming of database applications with relational database management systems. It covers conceptual modelling with the entity-relationship model and logical modelling with the relational model. It also presents the techniques for the normalisation of logical designs based on functional dependencies, i.e. the decomposition into Boyce-Codd and third normal forms. Also covered are t-upple and domain relational calculi, as well as relational algebra. This book illustrates the main SQL data definition and data manipulation statements and looks at contemporary approaches to coupling SQL with general purpose programming languages. Introduction to Database Systems concludes with a brief catalogue raisonné of textbooks on databases.

Learn to implement ASP.NET Core features to build effective software that can be scaled and maintained

easily Key Features Practical solutions to recurring issues in the web development world Recipes on the latest features of ASP.Net Core 2.0 Coverage of Bootstrap, Angular, and JavaScript lets you supercharge your frontend Book Description The ASP.NET Core 2.0 Framework has been designed to meet all the needs of today's web developers. It provides better control, support for test-driven development, and cleaner code. Moreover, it's lightweight and allows you to run apps on Windows, OSX and Linux, making it the most popular web framework with modern day developers. This book takes a unique approach to web development, using real-world examples to guide you through problems with ASP.NET Core 2.0 web applications. It covers Visual Studio 2017- and ASP.NET Core 2.0-specific changes and provides general MVC development recipes. It explores setting up .NET Core, Visual Studio 2017, Node.js modules, and NuGet. Next, it shows you how to work with Inversion of Control data pattern and caching. We explore everyday ASP.NET Core MVC 2.0 patterns and go beyond it into troubleshooting. Finally, we lead you through migrating, hosting, and deploying your code. By the end of the book, you'll not only have explored every aspect of ASP.NET Core MVC 2.0, you'll also have a reference you can keep coming back to whenever you need to get the job done. What you will learn Build ASP.Net Core 2.0 applications using HTTP services with WebApi Learn to unit-test, load test, and perform test applications using client-side and server-side frameworks Debug, monitor and troubleshoot ASP.Net Core 2.0 applications using popular tools

Reuse components with NuGet and create modular components with middleware Create applications using client-side technologies such as HTML5, JavaScript, jQuery, and Angular Build responsive and dynamic UIs for your MVC apps using Bootstrap Leverage tools like Karma, Jasmine, QUnit, xUnit, Selenium, Microsoft Fakes, and Visual Studio 2017 Enterprise Who this book is for This book is written for the ASP.NET developer who wants to deliver professional-standard software, quickly and efficiently. It's filled with hands-on recipes, practical advice, and guidance to help developers with every aspect of the ASP.NET development cycle. Whether you've just started out or are a seasoned pro, the Asp.Net Core 2.0 Cookbook is written for you. What others in the trenches say about The Pragmatic Programmer... "The cool thing about this book is that it's great for keeping the programming process fresh. The book helps you to continue to grow and clearly comes from people who have been there." —Kent Beck, author of Extreme Programming Explained: Embrace Change "I found this book to be a great mix of solid advice and wonderful analogies!" —Martin Fowler, author of Refactoring and UML Distilled "I would buy a copy, read it twice, then tell all my colleagues to run out and grab a copy. This is a book I would never loan because I would worry about it being lost." —Kevin Ruland, Management Science, MSG-Logistics "The wisdom and practical experience of the authors is obvious. The topics presented are relevant and useful.... By far its greatest strength for me has been the outstanding analogies—tracer bullets, broken windows, and the

fabulous helicopter-based explanation of the need for orthogonality, especially in a crisis situation. I have little doubt that this book will eventually become an excellent source of useful information for journeymen programmers and expert mentors alike.” —John Lakos, author of *Large-Scale C++ Software Design* “This is the sort of book I will buy a dozen copies of when it comes out so I can give it to my clients.” —Eric Vought, Software Engineer “Most modern books on software development fail to cover the basics of what makes a great software developer, instead spending their time on syntax or technology where in reality the greatest leverage possible for any software team is in having talented developers who really know their craft well. An excellent book.” —Pete McBreen, Independent Consultant “Since reading this book, I have implemented many of the practical suggestions and tips it contains. Across the board, they have saved my company time and money while helping me get my job done quicker! This should be a desktop reference for everyone who works with code for a living.” —Jared Richardson, Senior Software Developer, iRenaissance, Inc. “I would like to see this issued to every new employee at my company....” —Chris Cleeland, Senior Software Engineer, Object Computing, Inc. “If I’m putting together a project, it’s the authors of this book that I want. . . . And failing that I’d settle for people who’ve read their book.” —Ward Cunningham

Straight from the programming trenches, *The Pragmatic Programmer* cuts through the increasing specialization and technicalities of modern software development to examine the core process--taking a requirement and

producing working, maintainable code that delights its users. It covers topics ranging from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you'll learn how to Fight software rot; Avoid the trap of duplicating knowledge; Write flexible, dynamic, and adaptable code; Avoid programming by coincidence; Bullet-proof your code with contracts, assertions, and exceptions; Capture real requirements; Test ruthlessly and effectively; Delight your users; Build teams of pragmatic programmers; and Make your developments more precise with automation. Written as a series of self-contained sections and filled with entertaining anecdotes, thoughtful examples, and interesting analogies, *The Pragmatic Programmer* illustrates the best practices and major pitfalls of many different aspects of software development. Whether you're a new coder, an experienced programmer, or a manager responsible for software projects, use these lessons daily, and you'll quickly see improvements in personal productivity, accuracy, and job satisfaction. You'll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You'll become a Pragmatic Programmer.

Outside of the world of enterprise computing, there is one database that enables a huge range of software and hardware to flex relational database capabilities, without the baggage and cost of traditional database management systems. That database is SQLite—an embeddable database with an amazingly small footprint, yet able to handle databases of enormous size. SQLite

comes equipped with an array of powerful features available through a host of programming and development environments. It is supported by languages such as C, Java, Perl, PHP, Python, Ruby, TCL, and more. The Definitive Guide to SQLite, Second Edition is devoted to complete coverage of the latest version of this powerful database. It offers a thorough overview of SQLite's capabilities and APIs. The book also uses SQLite as the basis for helping newcomers make their first foray into database development. In only a short time you can be writing programs as diverse as a server-side browser plug-in or the next great iPhone or Android application! Learn about SQLite extensions for C, Java, Perl, PHP, Python, Ruby, and Tcl. Get solid coverage of SQLite internals. Explore developing iOS (iPhone) and Android applications with SQLite. SQLite is the solution chosen for thousands of products around the world, from mobile phones and GPS devices to set-top boxes and web browsers. You almost certainly use SQLite every day without even realizing it!

Avoid getting lost in the complexity of Azure with The Azure Cloud Native Architecture Mapbook. This book will give you an expert-guided tour of Azure and help you map different architectural perspectives for various architecture disciplines. You'll learn how to apply the different architectural styles and become a better Azure Architect.

Users can dramatically improve the design, performance, and manageability of object-oriented code without altering its interfaces or behavior. "Refactoring" shows users exactly how to spot the best opportunities for

refactoring and exactly how to do it, step by step. Jump-start your career as a data scientist—learn to develop datasets for exploration, analysis, and machine learning

**SQL for Data Scientists: A Beginner's Guide for Building Datasets for Analysis** is a resource that's dedicated to the Structured Query Language (SQL) and dataset design skills that data scientists use most. Aspiring data scientists will learn how to how to construct datasets for exploration, analysis, and machine learning. You can also discover how to approach query design and develop SQL code to extract data insights while avoiding common pitfalls. You may be one of many people who are entering the field of Data Science from a range of professions and educational backgrounds, such as business analytics, social science, physics, economics, and computer science. Like many of them, you may have conducted analyses using spreadsheets as data sources, but never retrieved and engineered datasets from a relational database using SQL, which is a programming language designed for managing databases and extracting data. This guide for data scientists differs from other instructional guides on the subject. It doesn't cover SQL broadly. Instead, you'll learn the subset of SQL skills that data analysts and data scientists use frequently. You'll also gain practical advice and direction on "how to think about constructing your dataset." Gain an



understanding of relational database structure, query design, and SQL syntax Develop queries to construct datasets for use in applications like interactive reports and machine learning algorithms Review strategies and approaches so you can design analytical datasets Practice your techniques with the provided database and SQL code In this book, author Renee Teate shares knowledge gained during a 15-year career working with data, in roles ranging from database developer to data analyst to data scientist. She guides you through SQL code and dataset design concepts from an industry practitioner's perspective, moving your data scientist career forward!

A guide to SQL covers such topics as retrieving records, metadata queries, working with strings, data arithmetic, date manipulation, reporting and warehousing, and hierarchical queries.

A poorly performing database application not only costs users time, but also has an impact on other applications running on the same computer or the same network. SQL Tuning provides an essential next step for SQL developers and database administrators who want to extend their SQL tuning expertise and get the most from their database applications. There are two basic issues to focus on when tuning SQL: how to find and interpret the execution plan of an SQL statement and how to change SQL to get a specific alternate execution

plan. SQL Tuning provides answers to these questions and addresses a third issue that's even more important: how to find the optimal execution plan for the query to use. Author Dan Tow outlines a timesaving method he's developed for finding the optimum execution plan--rapidly and systematically--regardless of the complexity of the SQL or the database platform being used. You'll learn how to understand and control SQL execution plans and how to diagram SQL queries to deduce the best execution plan for a query. Key chapters in the book include exercises to reinforce the concepts you've learned. SQL Tuning concludes by addressing special concerns and unique solutions to "unsolvable problems." Whether you are a programmer who develops SQL-based applications or a database administrator or other who troubleshoots poorly tuned applications, SQL Tuning will arm you with a reliable and deterministic method for tuning your SQL queries to gain optimal performance.

All of today's mainstream database products support the SQL language, and relational theory is what SQL is supposed to be based on. But are those products truly relational? Sadly, the answer is no. This book shows you what a real relational product would be like, and how and why it would be so much better than what's currently available. With this unique book, you will: Learn how to see database

systems as programming systems Get a careful, precise, and detailed definition of the relational model Explore a detailed analysis of SQL from a relational point of view There are literally hundreds of books on relational theory or the SQL language or both. But this one is different. First, nobody is more qualified than Chris Date to write such a book. He and Ted Codd, inventor of the relational model, were colleagues for many years, and Chris's involvement with the technology goes back to the time of Codd's first papers in 1969 and 1970. Second, most books try to use SQL as a vehicle for teaching relational theory, but this book deliberately takes the opposite approach. Its primary aim is to teach relational theory as such. Then it uses that theory as a vehicle for teaching SQL, showing in particular how that theory can help with the practical problem of using SQL correctly and productively. Any computer professional who wants to understand what relational systems are all about can benefit from this book. No prior knowledge of databases is assumed. Sams Teach Yourself SQL in 10 Minutes, Fourth Edition New full-color code examples help you see how SQL statements are structured Whether you're an application developer, database administrator, web application designer, mobile app developer, or Microsoft Office users, a good working knowledge of SQL is an important part of interacting with databases. And Sams Teach Yourself SQL in 10

Minutes offers the straightforward, practical answers you need to help you do your job. Expert trainer and popular author Ben Forta teaches you just the parts of SQL you need to know—starting with simple data retrieval and quickly going on to more complex topics including the use of joins, subqueries, stored procedures, cursors, triggers, and table constraints. You'll learn methodically, systematically, and simply—in 22 short, quick lessons that will each take only 10 minutes or less to complete. With the Fourth Edition of this worldwide bestseller, the book has been thoroughly updated, expanded, and improved. Lessons now cover the latest versions of IBM DB2, Microsoft Access, Microsoft SQL Server, MySQL, Oracle, PostgreSQL, SQLite, MariaDB, and Apache Open Office Base. And new full-color SQL code listings help the beginner clearly see the elements and structure of the language. 10 minutes is all you need to learn how to...

- Use the major SQL statements
- Construct complex SQL statements using multiple clauses and operators
- Retrieve, sort, and format database contents
- Pinpoint the data you need using a variety of filtering techniques
- Use aggregate functions to summarize data
- Join two or more related tables
- Insert, update, and delete data
- Create and alter database tables
- Work with views, stored procedures, and more

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Arguably the most capable of all the open source databases, PostgreSQL is an object-relational database management system first developed in 1977 by the University of California at Berkeley. In spite of its long history, this robust database suffers from a lack of easy-to-use documentation. Practical PostgreSQL fills that void with a fast-paced guide to installation, configuration, and usage. This comprehensive new volume shows you how to compile PostgreSQL from source, create a database, and configure PostgreSQL to accept client-server connections. It also covers the many advanced features, such as transactions, versioning, replication, and referential integrity that enable developers and DBAs to use PostgreSQL for serious

business applications. The thorough introduction to PostgreSQL's PL/pgSQL programming language explains how you can use this very useful but under-documented feature to develop stored procedures and triggers. The book includes a complete command reference, and database administrators will appreciate the chapters on user management, database maintenance, and backup & recovery. With *Practical PostgreSQL*, you will discover quickly why this open source database is such a great open source alternative to proprietary products from Oracle, IBM, and Microsoft.

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.

*ASP.NET 3.5 Unleashed* is the most comprehensive book available on the Microsoft ASP.NET 3.5 Framework, covering all aspects of the ASP.NET 3.5 Framework--no matter how advanced. This edition covers all the new features of ASP.NET 3.5. It explains Microsoft LINQ to SQL in detail. It includes a chapter on the two new data access controls introduced with the ASP.NET 3.5 Framework: *ListView* and *DataPager*. With its coverage of ASP.NET AJAX, this book shows you how to take advantage of Microsoft's server-side AJAX framework to retrofit existing ASP.NET applications with AJAX functionality. It also demonstrates how to

use Microsoft's client-side AJAX framework to build the web applications of the future: pure client-side AJAX applications. All code samples are written in the C# programming language. (Visual Basic versions of all code samples are included on the CD-ROM that accompanies this book.) Take advantage of Microsoft's new database query language, LINQ to SQL, to easily build database-driven web applications Learn how to use the new ListView and DataPager data access controls to build flexible user interfaces Take advantage of ASP.NET AJAX when building both server-side and client-side web applications Use the AJAX Control Toolkit to create auto-complete text fields, draggable panels, masked edit fields, and complex animations Design ASP.NET websites Secure your ASP.NET applications Create custom components Build highly interactive websites that can scale to handle thousands of simultaneous users Learn to build a complete ASP.NET 3.5 website from start to finish--the last chapter of the book includes a sample ASP.NET 3.5 web application written with LINQ to SQL and ASP.NET AJAX CD-ROM includes all examples and source code presented in this book in both C# and Visual Basic.

Are you an SQL programmer that, like many, came to SQL after learning and writing procedural or object-oriented code? Or have switched jobs to where a different brand of SQL is being used, or maybe even

been told to learn SQL yourself? If even one answer is yes, then you need this book. A "Manual of Style" for the SQL programmer, this book is a collection of heuristics and rules, tips, and tricks that will help you improve SQL programming style and proficiency, and for formatting and writing portable, readable, maintainable SQL code. Based on many years of experience consulting in SQL shops, and gathering questions and resolving his students' SQL style issues, Joe Celko can help you become an even better SQL programmer. Help you write Standard SQL without an accent or a dialect that is used in another programming language or a specific flavor of SQL, code that can be maintained and used by other people. Enable you to give your group a coding standard for internal use, to enable programmers to use a consistent style. Give you the mental tools to approach a new problem with SQL as your tool, rather than another programming language — one that someone else might not know!

For all the buzz about trendy IT techniques, data processing is still at the core of our systems, especially now that enterprises all over the world are confronted with exploding volumes of data. Database performance has become a major headache, and most IT departments believe that developers should provide simple SQL code to solve immediate problems and let DBAs tune any "bad SQL" later. In *The Art of SQL*, author and SQL



expert Stephane Faroult argues that this "safe approach" only leads to disaster. His insightful book, named after Art of War by Sun Tzu, contends that writing quick inefficient code is sweeping the dirt under the rug. SQL code may run for 5 to 10 years, surviving several major releases of the database management system and on several generations of hardware. The code must be fast and sound from the start, and that requires a firm understanding of SQL and relational theory. The Art of SQL offers best practices that teach experienced SQL users to focus on strategy rather than specifics. Faroult's approach takes a page from Sun Tzu's classic treatise by viewing database design as a military campaign. You need knowledge, skills, and talent. Talent can't be taught, but every strategist from Sun Tzu to modern-day generals believed that it can be nurtured through the experience of others. They passed on their experience acquired in the field through basic principles that served as guiding stars amid the sound and fury of battle. This is what Faroult does with SQL. Like a successful battle plan, good architectural choices are based on contingencies. What if the volume of this or that table increases unexpectedly? What if, following a merger, the number of users doubles? What if you want to keep several years of data online? Faroult's way of looking at SQL performance may be unconventional and unique, but he's deadly serious about writing

good SQL and using SQL well. The Art of SQL is not a cookbook, listing problems and giving recipes. The aim is to get you-and your manager-to raise good questions.

What can you do when database performance doesn't meet expectations? Before you turn to expensive hardware upgrades to solve the problem, reach for this book. Refactoring SQL Applications provides a set of tested options for making code modifications to dramatically improve the way your database applications function. Backed by real-world examples, you'll find quick fixes for simple problems, in-depth answers for more complex situations, and complete solutions for applications with extensive problems. Learn to: Determine if and where you can expect performance gains Apply quick fixes, such as limiting calls to the database in stored functions and procedures Refactor tasks, such as replacing application code by a stored procedure, or replacing iterative, procedural statements with sweeping SQL statements Refactor flow by increasing parallelism and switching business-induced processing from synchronous to asynchronous Refactor design using schema extensions, regular views, materialized views, partitioning, and more Compare before and after versions of a program to ensure you get the same results once you make modifications Refactoring SQL Applications teaches you to recognize and assess code that needs refactoring,

and to understand the crucial link between refactoring and performance. If and when your application bogs down, this book will help you get it back up to speed.

SQL Success is about problem-solving in SQL. It bridges the gap between dry and dull database theory books, and developer books that focus on giving recipes without explaining sufficiently the reasons behind the recipes or discussing alternative solutions. Many developers struggle with SQL due to the contrast between the top-down logic of most programming languages and SQL's set-based approach. SQL Success aims to be different. This book is more than syntax examples. SQL Success explains how to use SQL to solve problems, and covers syntax in the process-not as the focus, but as a tool toward accomplishing the objective. SQL Success also shows something that most other books do not: the pitfalls and traps of SQL, a deceptively simple language, and how easy it is to get a query wrong. Written in a conversational way, SQL Success talks about logic more than theory, avoids jargon, and refers to common-sense more than rules. It ignores features that are rarely used and tries to avoid information overload. The intention of SQL Success is not to cover every aspect of all variants of SQL. The goal is to cover everything that is of practical use. That goal is informed by the author's many years of practical experience leading

an understanding of what professional developers need to know, the common mistakes that are made, and how those mistakes can be avoided. \* Focuses on the practical implications of theory. \* Emphasizes accuracy and efficiency. \* Teaches how to "think SQL," not merely the syntax. \* Applies to Oracle, SQL Server, MySQL, PostgreSQL, DB2, and SQLite. \* Suitable for college-level database courses, SQL certification preparation, and professionals who want to take their database skills to the next level. \*

Bolstered by downloadable files and online database with practice exercises at <http://edu.konagora.com>. \* Includes resources for instructors. About the author: Stephane Faroult has been performing database consultancy work for more than a quarter of a century with major French companies; he taught Computer Science undergraduates a long time ago and many professional developers since then. He is the author of two professional books, *The Art of SQL* and *Refactoring SQL Applications* (both by O'Reilly). *SQL Success* is a prequel to those books, giving readers a strong foundation in SQL."

SQL is full of difficulties and traps for the unwary. You can avoid them if you understand relational theory, but only if you know how to put the theory into practice. In this insightful book, author C.J. Date explains relational theory in depth, and demonstrates through numerous examples and exercises how you can apply it directly to your use of SQL. This second

edition includes new material on recursive queries, “missing information” without nulls, new update operators, and topics such as aggregate operators, grouping and ungrouping, and view updating. If you have a modest-to-advanced background in SQL, you’ll learn how to deal with a host of common SQL dilemmas. Why is proper column naming so important? Nulls in your database are causing you to get wrong answers. Why? What can you do about it? Is it possible to write an SQL query to find employees who have never been in the same department for more than six months at a time? SQL supports “quantified comparisons,” but they’re better avoided. Why? How do you avoid them? Constraints are crucially important, but most SQL products don’t support them properly. What can you do to resolve this situation? Database theory and practice have evolved since the relational model was developed more than 40 years ago. SQL and Relational Theory draws on decades of research to present the most up-to-date treatment of SQL available. C.J. Date has a stature that is unique within the database industry. A prolific writer well known for the bestselling textbook *An Introduction to Database Systems* (Addison-Wesley), he has an exceptionally clear style when writing about complex principles and theory.

*Searching Multimedia Databases by Content* bridges the gap between the database and signal processing

communities by providing the necessary background information for the reader and presenting it along with the intuition and mechanics of the best existing tools in each area. The first half of *Searching Multimedia Databases by Content* reviews the most successful database access methods, in increasing complexity, reaching up to spatial access methods and text retrieval. In all cases, the emphasis is on practical approaches that have been incorporated in commercial systems, or that seem very promising. The second half of the book uses the above access methods to achieve fast searching in a database of signals. A general methodology is presented, which suggests extracting a few good features from each multimedia object, thus mapping objects into points in a metric space. Finally, the book concludes by presenting some recent successful applications of the methodology on time series and color images. *Searching Multimedia Databases by Content* is targeted towards researchers and developers of multimedia systems. The book can also serve as a textbook for a graduate course on multimedia searching, covering both access methods as well as the basics of signal processing.

*Summary R in Action, Second Edition* presents both the R language and the examples that make it so useful for business developers. Focusing on practical solutions, the book offers a crash course in statistics and covers elegant methods for dealing

with messy and incomplete data that are difficult to analyze using traditional methods. You'll also master R's extensive graphical capabilities for exploring and presenting data visually. And this expanded second edition includes new chapters on time series analysis, cluster analysis, and classification methodologies, including decision trees, random forests, and support vector machines. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Business pros and researchers thrive on data, and R speaks the language of data analysis. R is a powerful programming language for statistical computing. Unlike general-purpose tools, R provides thousands of modules for solving just about any data-crunching or presentation challenge you're likely to face. R runs on all important platforms and is used by thousands of major corporations and institutions worldwide. About the Book R in Action, Second Edition teaches you how to use the R language by presenting examples relevant to scientific, technical, and business developers. Focusing on practical solutions, the book offers a crash course in statistics, including elegant methods for dealing with messy and incomplete data. You'll also master R's extensive graphical capabilities for exploring and presenting data visually. And this expanded second edition includes new chapters on forecasting, data mining, and dynamic report writing.

What's Inside Complete R language tutorial Using R to manage, analyze, and visualize data Techniques for debugging programs and creating packages OOP in R Over 160 graphs About the Author Dr. Rob Kabacoff is a seasoned researcher and teacher who specializes in data analysis. He also maintains the popular Quick-R website at [statmethods.net](http://statmethods.net). Table of Contents PART 1 GETTING STARTED

Introduction to R Creating a dataset Getting started with graphs Basic data management Advanced data management PART 2 BASIC METHODS Basic graphs Basic statistics PART 3 INTERMEDIATE METHODS Regression Analysis of variance Power analysis Intermediate graphs Resampling statistics and bootstrapping PART 4 ADVANCED METHODS Generalized linear models Principal components and factor analysis Time series Cluster analysis Classification Advanced methods for missing data PART 5 EXPANDING YOUR SKILLS Advanced graphics with ggplot2 Advanced programming Creating a package Creating dynamic reports Advanced graphics with the lattice package available online only from [manning.com/kabacoff2](http://manning.com/kabacoff2) Covers comprehensive issues and challenges discovered through leading international XML database research.

Beginning Database Design, Second Edition provides short, easy-to-read explanations of how to get database design right the first time. This book



offers numerous examples to help you avoid the many pitfalls that entrap new and not-so-new database designers. Through the help of use cases and class diagrams modeled in the UML, you'll learn to discover and represent the details and scope of any design problem you choose to attack. Database design is not an exact science. Many are surprised to find that problems with their databases are caused by poor design rather than by difficulties in using the database management software. Beginning Database Design, Second Edition helps you ask and answer important questions about your data so you can understand the problem you are trying to solve and create a pragmatic design capturing the essentials while leaving the door open for refinements and extension at a later stage. Solid database design principles and examples help demonstrate the consequences of simplifications and pragmatic decisions. The rationale is to try to keep a design simple, but allow room for development as situations change or resources permit. Provides solid design principles by which to avoid pitfalls and support changing needs Includes numerous examples of good and bad design decisions and their consequences Shows a modern method for documenting design using the Unified Modeling Language Provides information on the basics of Ajax to create Web applications that function like desktop

programs.

"It's not easy to find such a generous book on big data and databases. Fortunately, this book is the one." Feng Yu. Computing Reviews. June 28, 2016. This is a book for enterprise architects, database administrators, and developers who need to understand the latest developments in database technologies. It is the book to help you choose the correct database technology at a time when concepts such as Big Data, NoSQL and NewSQL are making what used to be an easy choice into a complex decision with significant implications. The relational database (RDBMS) model completely dominated database technology for over 20 years. Today this "one size fits all" stability has been disrupted by a relatively recent explosion of new database technologies. These paradigm-busting technologies are powering the "Big Data" and "NoSQL" revolutions, as well as forcing fundamental changes in databases across the board. Deciding to use a relational database was once truly a no-brainer, and the various commercial relational databases competed on price, performance, reliability, and ease of use rather than on fundamental architectures. Today we are faced with choices between radically different database technologies. Choosing the right database today is a complex undertaking, with serious economic and technological consequences. Next Generation Databases demystifies today's new database technologies. The book describes what each technology was designed to solve. It shows how each technology can be used to solve real word application and business problems. Most importantly, this book highlights the architectural differences between technologies that are the critical factors to consider when choosing a database platform for new and upcoming projects. Introduces the new technologies that have revolutionized the database landscape

Describes how each technology can be used to solve specific application or business challenges Reviews the most popular new wave databases and how they use these new database technologies

Create memorable presentations on technical and complex topics in slideware such as Microsoft PowerPoint and Apple's Keynote for Mac. Learn good pacing and rhythm as well as judicious use of special effects. Whether the goal is to help a sale or to educate, and whether the final delivery is a live presentation, a webinar, or a short video presentation, this book focuses on the particular difficulties linked to technical presentations. You will learn to create a story when there is none, gain the interest of an audience who may not feel as strongly for the topic as the speaker does, turn abstract concepts into visual models, overcome the limitations of the medium (limited space, two dimensions), maintain interest through rhythm, and use effects, not to look cool or get that "WOW" moment, but to serve the message. Getting The Message Across presents a number of field-tested ideas for raising interest. The use of various techniques and careful scripting will help you, even if you aren't a natural-born show-person, to communicate effectively, and to make your audience remember your message, and not necessarily your slides. This book will teach you: Rhythm and animations, and the use of transitions To hold audience interest even with "dry" topics To create memorable presentations Techniques useful for PowerPoint, Keynote for Mac, and any similar presentation medium or environment What You Will Learn Turn austere topics into interesting stories. Give rhythm and pacing to your presentations. Build a narrative during transitions and animations. Hold audience interest and make listeners feel clever. Make people remember your presentation rather than your cool use of slideware. Who This Book Is For People who have to communicate effectively on

strongly technical topics. This book targets educators and trainers as well as technical consultants who need to present complex solutions to customers or leads, as well as would-be speakers at scientific or technical conferences. *Getting The Message Across* is a book for people who want to make their presentations not only more attractive, but really memorable. It is for people who aren't looking for a standing ovation, but who are willing to do what they can to be understood and to make their messages remembered. *Getting The Message Across* focuses on using slideware such as PowerPoint and Keynote. Such slideware, for all its flaws, is still one of the best ways to communicate, not only live, but also in dematerialized communications (webinars, video tutorials) for reaching an ever-growing audience.

Because databases often stay in production for decades, careful design is critical to making the database serve the needs of your users over years, and to avoid subtle errors or performance problems. In this book, C.J. Date, a leading exponent of relational databases, lays out the principles of good database design.

Despite the wide use of SQL \*Plus, few developers and database administrators know how powerful it really is. And the syntax can sometimes be tricky. This portable guide provides a quick reference to subjects such as interacting with SQL \*Plus, selecting data, formatting reports, writing scripting, and tuning SQL. There's also a command reference.

Updated for the latest database management systems -- including MySQL 6.0, Oracle 11g, and Microsoft's SQL Server 2008 -- this introductory guide will get you up and running with SQL quickly. Whether you need to write database applications, perform administrative tasks, or generate reports, *Learning SQL, Second Edition*, will help you easily master all the SQL fundamentals. Each chapter

presents a self-contained lesson on a key SQL concept or technique, with numerous illustrations and annotated examples. Exercises at the end of each chapter let you practice the skills you learn. With this book, you will: Move quickly through SQL basics and learn several advanced features Use SQL data statements to generate, manipulate, and retrieve data Create database objects, such as tables, indexes, and constraints, using SQL schema statements Learn how data sets interact with queries, and understand the importance of subqueries Convert and manipulate data with SQL's built-in functions, and use conditional logic in data statements Knowledge of SQL is a must for interacting with data. With Learning SQL, you'll quickly learn how to put the power and flexibility of this language to work.

Microsoft PowerPivot is a free add-on to Excel from Microsoft that allows users to produce new kinds of reports and analyses that were simply impossible before, and this book is the first to tackle DAX formulas, the core capability of PowerPivot, from the perspective of the Excel audience. Written by the world's foremost PowerPivot blogger and practitioner, the book's concepts and approach are introduced in a simple, step-by-step manner tailored to the learning style of Excel users everywhere. The techniques presented allow users to produce, in hours or even minutes, results that formerly would have taken entire teams weeks or months to produce. It includes lessons on the difference between calculated columns and measures; how formulas can be reused across reports of completely different shapes; how to merge disjointed sets of data into unified reports; how to make certain columns in a pivot behave as if the pivot were filtered while other columns do not; and how to create time-intelligent calculations in pivot tables such as "Year over Year" and "Moving Averages" whether they use a standard, fiscal, or a complete custom calendar. The "pattern-like"

techniques and best practices contained in this book have been developed and refined over two years of onsite training with Excel users around the world, and the key lessons from those seminars costing thousands of dollars per day are now available to within the pages of this easy-to-follow guide. This updated second edition covers new features introduced with Office 2015.

"Master every business SQL skill you need! Grouping, totaling, summaries, modifying databases, integrating data from multiple tables, and much more! Includes video introduction, 2+ hours of expert audio commentary, 200+ animated figures, 100+ self review questions, 100+ exercises, searching, hyperlinking, and more."--Container.

R and Data Mining introduces researchers, post-graduate students, and analysts to data mining using R, a free software environment for statistical computing and graphics. The book provides practical methods for using R in applications from academia to industry to extract knowledge from vast amounts of data. Readers will find this book a valuable guide to the use of R in tasks such as classification and prediction, clustering, outlier detection, association rules, sequence analysis, text mining, social network analysis, sentiment analysis, and more. Data mining techniques are growing in popularity in a broad range of areas, from banking to insurance, retail, telecom, medicine, research, and government. This book focuses on the modeling phase of the data mining process, also addressing data exploration and model evaluation. With three in-depth case studies, a quick reference guide, bibliography, and links to a wealth of online resources, R and Data Mining is a valuable, practical guide to a powerful method of analysis. Presents an introduction into using R for data mining applications, covering most popular data mining techniques Provides code examples and data so that readers can easily learn the techniques Features case

studies in real-world applications to help readers apply the techniques in their work

This book sheds light on the principles behind the relational model, which is fundamental to all database-backed applications--and, consequently, most of the work that goes on in the computing world today. Database in Depth: The Relational Model for Practitioners goes beyond the hype and gets to the heart of how relational databases actually work. Ideal for experienced database developers and designers, this concise guide gives you a clear view of the technology--a view that's not influenced by any vendor or product. Featuring an extensive set of exercises, it will help you: understand why and how the relational model is still directly relevant to modern database technology (and will remain so for the foreseeable future) see why and how the SQL standard is seriously deficient use the best current theoretical knowledge in the design of their databases and database applications make informed decisions in their daily database professional activities Database in Depth will appeal not only to database developers and designers, but also to a diverse field of professionals and academics, including database administrators (DBAs), information modelers, database consultants, and more. Virtually everyone who deals with relational databases should have at least a passing understanding of the fundamentals of working with relational models. Author C.J. Date has been involved with the relational model from its earliest days. An exceptionally clear-thinking writer, Date lays out principle and theory in a manner that is easily understood. Few others can speak as authoritatively the topic of relational databases as Date can. Performance problems are rarely "problems" per se. They are more often "crises" during which you're pressured for results by a manager standing outside

your cubicle while your phone rings with queries from the help desk. You won't have the time for a leisurely perusal of the manuals, nor to lean back and read a book on theory. What you need in that situation is a book of solutions, and solutions are precisely what Oracle Database 12c Performance Tuning Recipes delivers. Oracle Database 12c Performance Tuning Recipes is a ready reference for database administrators in need of immediate help with performance issues relating to Oracle Database. The book takes an example-based approach, wherein each chapter covers a specific problem domain. Within each chapter are "recipes," showing by example how to perform common tasks in that chapter's domain. Solutions in the recipes are backed by clear explanations of background and theory from the author team. Whatever the task, if it's performance-related, you'll probably find a recipe and a solution in this book. Provides proven solutions to real-life Oracle performance problems Offers relevant background and theory to support each solution Gets straight to the point for when you're under pressure for results

We welcome you to the Second International Conference on E commerce and Web Technology (ECWEB 2001) held in conjunction with DEXA 2001 in Munich, Germany. This conference, now in its second year, is a forum to bring together researchers from academia and commercial



developers from industry to discuss the state of the art in E commerce and web technology and explore new ideas. We thank you all for coming to Munich to participate and debate the new emerging advances in this area. The research presentation and discussion during the conference will help to exchange new ideas among the researchers, developers, and practitioners. The conference program consists of an invited talk by Hannes Werthner, University of Trento, Italy, as well as the technical sessions. The regular sessions cover topics from XML Transformations and Web Development to User Behavior and Case Studies. The workshop has attracted more than 80 papers and each paper has been reviewed by at least 3 program committee members for its merit. The program committee have selected 31 papers for presentation. We would like to express our thanks to the people who helped put together the technical program: the program committee members and external reviewers for their timely and rigorous reviews of the papers, the DEXA organizing committee for their help in administrative work and support, and special thanks to Gabriela Wagner for always responding promptly.

If you are a database developer who wants to learn how to design and implement databases for application development using PostgreSQL, this is the book for you. Existing knowledge of basic

database concepts and some programming experience is required

SQL Server 2012 Integration Services Design Patterns is a book of recipes for SQL Server Integration Services (SSIS). Design patterns in the book show how to solve common problems encountered when developing data integration solutions. Because you do not have to build the code from scratch each time, using design patterns improves your efficiency as an SSIS developer. In SSIS Design Patterns, we take you through several of these snippets in detail, providing the technical details of the resolution. SQL Server 2012 Integration Services Design Patterns does not focus on the problems to be solved; instead, the book delves into why particular problems should be solved in certain ways. You'll learn more about SSIS as a result, and you'll learn by practical example. Where appropriate, SQL Server 2012 Integration Services Design Patterns provides examples of alternative patterns and discusses when and where they should be used. Highlights of the book include sections on ETL Instrumentation, SSIS Frameworks, and Dependency Services. Takes you through solutions to several common data integration challenges Demonstrates new features in SQL Server 2012 Integration Services Teaches SSIS using practical examples

From Kevin Hartman, Director of Analytics at

Google, comes an essential guide for anyone seeking to collect, analyze, and visualize data in today's digital world (printed in black & white to keep print costs down). Even if you know nothing about digital marketing analytics, digital marketing analytics knows plenty about you. It's a fundamental, inescapable, and permanent cornerstone of modern business that affects the lives of analytics professionals and consumers in equal measure. This five-part book is an attempt to provide the context, perspective, and information needed to make analytics accessible to people who understand its reach and relevance and want to learn more. PART 1: The Day the Geeks Took Over The ubiquity of data analytics today isn't just a product of the past half-century's transformative and revolutionary changes in commerce and technology. Humanity has been developing, analyzing, and using data for millennia. Understanding where digital marketing analytics is now and where it will be in five, 10, or 50 years requires a holistic and historical view of our relationship and interaction with data. Part 1 looks at modern analysts and analytics in the context of its distinct historical epochs, each one containing major inflection points and laying a foundation for future advancements in the ART + SCIENCE that is modern data analytics. PART 2: Consumer/Brand Relationships The methods that brands use to build relationships with consumers - online video, search,

display ads, and social media - give analysts a wealth of data about behaviors on these platforms. Knowing how to assess successful consumer/brand relationships and understanding a consumer's purchase journey requires a useable framework for parsing this data. In Part 2, we explore each digital channel in-depth, including a discussion of key metrics and measurements, how consumers interact with brands on each platform, and ways of organizing consumer data that enable actionable insights. PART 3: The Science of Analytics Part 3 focuses on understanding digital data creation, how brands use that data to measure digital marketing effectiveness, and the tools and skill sets analysts need to work effectively with data. While the contents are lightly technical, this section veers into the colloquial as we dive into multitouch attribution models, media mix models, incrementality studies, and other ways analysts conduct marketing measurement today. Part 3 also provides a useful framework for evaluating data analysis and visualization tools and explains the critical importance of digital marketing maturity to analysts and the companies for which they work. PART 4: The Art of Analytics Every analyst dreams of coming up with the "Big Idea" - the game-changing and previously unseen insight or approach that gives their organization a competitive advantage and their career a huge boost. But dreaming won't get you

there. It requires a thoughtful and disciplined approach to analysis projects. In this part of the book, I detail the four elements of the Marketing Analytics Process (MAP): plan, collect, analyze, report. Part 4 also explains the role of the analyst, the six mutually exclusive and collectively exhaustive ("MECE") marketing objectives, how to find context and patterns in collected data, and how to avoid the pitfalls of bias. PART 5: Storytelling with Data In Part 5, we dive headlong into the most important aspect of digital marketing analytics: transforming the data the analyst compiled into a comprehensive, coherent, and meaningful report. I outline the key characteristics of good visuals and the minutiae of chart design and provide a five-step process for analysts to follow when they're on their feet and presenting to an audience.

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