

Excel Scientific And Engineering Cookbook Cookbooks Oreilly

The sole survivor on a desperate, last-chance mission to save both humanity and the earth, Ryland Grace is hurtled into the depths of space when he must conquer an extinction-level threat to our species.

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

Extract accurate information from data to train and improve machine learning models using NumPy, SciPy, pandas, and scikit-learn libraries Key Features Discover solutions for feature generation, feature extraction, and feature selection Uncover the end-to-end feature engineering process across continuous, discrete, and unstructured datasets Implement modern feature extraction techniques using Python's pandas, scikit-learn, SciPy and NumPy libraries Book Description Feature engineering is invaluable for developing and enriching your machine learning models. In this cookbook, you will work with the best tools to streamline your feature engineering pipelines and techniques and simplify and improve the quality of your code. Using Python libraries such as pandas, scikit-learn, Featuretools, and Feature-engine, you'll learn how to work with both continuous and discrete datasets and be able to transform features from unstructured datasets. You will develop the skills necessary to select the best features as well as the most suitable extraction techniques. This book will cover Python recipes that will help you automate feature engineering to simplify complex processes. You'll also get to grips with different feature engineering strategies, such as the box-cox transform, power transform, and log transform across machine learning, reinforcement learning, and natural language processing (NLP) domains. By the end of this book, you'll have discovered tips and practical solutions to all of your feature engineering problems. What you will learn Simplify your feature engineering pipelines with powerful Python packages Get to grips with imputing missing values Encode categorical variables with a wide set of techniques Extract insights from text quickly and effortlessly Develop features from transactional data and time series data Derive new features by combining existing variables Understand how to transform, discretize, and scale your variables Create informative variables from date and time Who this book is for This book is for

machine learning professionals, AI engineers, data scientists, and NLP and reinforcement learning engineers who want to optimize and enrich their machine learning models with the best features. Knowledge of machine learning and Python coding will assist you with understanding the concepts covered in this book.

Elementary Materials Science covers the subject of materials science with few equations; it is intended primarily for students with limited science backgrounds who are interested in materials. The book also will be useful for non-technical professionals in the materials industry.

"This book by Lisa Tauxe and others is a marvelous tool for education and research in Paleomagnetism. Many students in the U.S. and around the world will welcome this publication, which was previously only available via the Internet. Professor Tauxe has performed a service for teaching and research that is utterly unique."—Neil D. Opdyke, University of Florida

How do you take your data analysis skills beyond Excel to the next level? By learning just enough Python to get stuff done. This hands-on guide shows non-programmers like you how to process information that's initially too messy or difficult to access. You don't need to know a thing about the Python programming language to get started. Through various step-by-step exercises, you'll learn how to acquire, clean, analyze, and present data efficiently. You'll also discover how to automate your data process, schedule file-editing and clean-up tasks, process larger datasets, and create compelling stories with data you obtain. Quickly learn basic Python syntax, data types, and language concepts Work with both machine-readable and human-consumable data Scrape websites and APIs to find a bounty of useful information Clean and format data to eliminate duplicates and errors in your datasets Learn when to standardize data and when to test and script data cleanup Explore and analyze your datasets with new Python libraries and techniques Use Python solutions to automate your entire data-wrangling process If you want to enrich your game's experience with physics-based realism, the expanded edition of this classic book details physics principles applicable to game development. You'll learn about collisions, explosions, sound, projectiles, and other effects used in games on Wii, PlayStation, Xbox, smartphones, and tablets. You'll also get a handle on how to take advantage of various sensors such as accelerometers and optical tracking devices. Authors David Bourg and Bryan Bywalec show you how to develop your own solutions to a variety of problems by providing technical background, formulas, and a few code examples. This updated book is indispensable whether you work alone or as part of a team. Refresh your knowledge of classical mechanics, including kinematics, force, kinetics, and collision response Explore rigid body dynamics, using real-time 2D and 3D simulations to handle rotation and inertia Apply concepts to real-world problems: model the behavior of boats, airplanes, cars, and sports balls Enhance your games with digital physics, using accelerometers, touch screens, GPS, optical tracking devices, and 3D displays Capture 3D sound effects with the OpenAL audio API

Create learning experiences that transform not only learning, but life itself. Learn about, improve, and expand your world of learning. This hands-on companion to the runaway best-seller, *Deep Learning: Engage the World Change the World*, provides an essential roadmap for building capacity in teachers, schools, districts, and systems to design deep learning, measure progress, and assess conditions needed to activate and

sustain innovation. Loaded with tips, tools, protocols, and real-world examples, the easy-to-use guide has everything educators need to construct and drive meaningful deep learning experiences that give purpose, unleash student potential, and prepare students to become problem-solving change agents in a global society.

Learn to fully harness the power of Microsoft Excel® to perform scientific and engineering calculations With this text as your guide, you can significantly enhance Microsoft Excel's® capabilities to execute the calculations needed to solve a variety of chemical, biochemical, physical, engineering, biological, and medicinal problems. The text begins with two chapters that introduce you to Excel's Visual Basic for Applications (VBA) programming language, which allows you to expand Excel's® capabilities, although you can still use the text without learning VBA. Following the author's step-by-step instructions, here are just a few of the calculations you learn to perform: Use worksheet functions to work with matrices Find roots of equations and solve systems of simultaneous equations Solve ordinary differential equations and partial differential equations Perform linear and non-linear regression Use random numbers and the Monte Carlo method This text is loaded with examples ranging from very basic to highly sophisticated solutions. More than 100 end-of-chapter problems help you test and put your knowledge to practice solving real-world problems. Answers and explanatory notes for most of the problems are provided in an appendix. The CD-ROM that accompanies this text provides several useful features: All the spreadsheets, charts, and VBA code needed to perform the examples from the text Solutions to most of the end-of-chapter problems An add-in workbook with more than twenty custom functions This text does not require any background in programming, so it is suitable for both undergraduate and graduate courses. Moreover, practitioners in science and engineering will find that this guide saves hours of time by enabling them to perform most of their calculations with one familiar spreadsheet package

Intended to anyone interested in numerical computing and data science: students, researchers, teachers, engineers, analysts, hobbyists... Basic knowledge of Python/NumPy is recommended. Some skills in mathematics will help you understand the theory behind the computational methods.

Beginning with a basic primer on reverse engineering-including computer internals, operating systems, and assembly language-and then discussing the various applications of reverse engineering, this book provides readers with practical, in-depth techniques for software reverse engineering. The book is broken into two parts, the first deals with security-related reverse engineering and the second explores the more practical aspects of reverse engineering. In addition, the author explains how to reverse engineer a third-party software library to improve interfacing and how to reverse engineer a competitor's software to build a better product. * The first popular book to show how software reverse engineering can help defend against security threats, speed up development, and unlock the secrets of competitive products * Helps developers plug security

holes by demonstrating how hackers exploit reverse engineering techniques to crack copy-protection schemes and identify software targets for viruses and other malware * Offers a primer on advanced reverse-engineering, delving into "disassembly"-code-level reverse engineering-and explaining how to decipher assembly language

Today, software engineers need to know not only how to program effectively but also how to develop proper engineering practices to make their codebase sustainable and healthy. This book emphasizes this difference between programming and software engineering. How can software engineers manage a living codebase that evolves and responds to changing requirements and demands over the length of its life? Based on their experience at Google, software engineers Titus Winters and Hyrum Wright, along with technical writer Tom Manshreck, present a candid and insightful look at how some of the world's leading practitioners construct and maintain software. This book covers Google's unique engineering culture, processes, and tools and how these aspects contribute to the effectiveness of an engineering organization. You'll explore three fundamental principles that software organizations should keep in mind when designing, architecting, writing, and maintaining code: How time affects the sustainability of software and how to make your code resilient over time How scale affects the viability of software practices within an engineering organization What trade-offs a typical engineer needs to make when evaluating design and development decisions

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development,

but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

This book provides a quick and effective way to learn Simio.

In its most advanced form, Integrated Computational Materials Engineering (ICME) holistically integrates manufacturing simulation, advanced materials models and component performance analysis. This volume contains thirty-five papers presented at the 1st World Congress on Integrated Computational Materials Engineering. Modeling processing-microstructure relationships, modeling microstructure-property relationships, and the role of ICME in graduate and undergraduate education are discussed. Ideal as a primary text for engineering students, this book motivates a wider understanding of the advantages and limitations offered by the various computational (and coordinated experimental) tools of this field.

The high-level language of R is recognized as one of the most powerful and flexible statistical software environments, and is rapidly becoming the standard

setting for quantitative analysis, statistics and graphics. R provides free access to unrivalled coverage and cutting-edge applications, enabling the user to apply numerous statistical methods ranging from simple regression to time series or multivariate analysis. Building on the success of the author's bestselling *Statistics: An Introduction using R*, *The R Book* is packed with worked examples, providing an all inclusive guide to R, ideal for novice and more accomplished users alike. The book assumes no background in statistics or computing and introduces the advantages of the R environment, detailing its applications in a wide range of disciplines. Provides the first comprehensive reference manual for the R language, including practical guidance and full coverage of the graphics facilities. Introduces all the statistical models covered by R, beginning with simple classical tests such as chi-square and t-test. Proceeds to examine more advance methods, from regression and analysis of variance, through to generalized linear models, generalized mixed models, time series, spatial statistics, multivariate statistics and much more. *The R Book* is aimed at undergraduates, postgraduates and professionals in science, engineering and medicine. It is also ideal for students and professionals in statistics, economics, geography and the social sciences.

The definitive, bestselling text in the field of change management, *Making Sense of Change Management* provides a thorough overview of the subject for both students and professionals. Along with explaining the theory of change management, it comprehensively covers the models, tools, and techniques of successful change management so organizations can adapt to tough market conditions and succeed by changing their strategies, structures, boundaries, mindsets, leadership behaviours and of course their expectations of the people who work within them. This completely revised and updated 4th edition of *Making Sense of Change Management* includes more international examples and case studies, emerging new thinking and practice in the area of cultural change and a new chapter on the interrelationship with project management (PM) and change management. It also covers complexity models, agile approaches, and stakeholder management along with cultural sensitivity and what to do when cultures collide. *Making Sense of Change Management* remains essential reading for anyone who is currently part of, or leading, a change initiative. Online supporting resources include lecture slides, making this an ideal textbook for MBA or graduate students focusing on leading or managing change.

You too can understand the statistics of life, even if you're math-challenged! What do you need to calculate? Manufacturing output? A curve for test scores? Sports stats? You and Excel can do it, and this non-intimidating guide shows you how. It demystifies the different types of statistics, how Excel functions and formulas work, the meaning of means and medians, how to interpret your figures, and more — in plain English. Getting there — learn how variables, samples, and probability are used to get the information you want Excel tricks — find out what's built into the program to help you work with Excel formulas *Playing with*

worksheets — get acquainted with the worksheet functions for each step
Graphic displays — present your data as pie graphs, bar graphs, line graphs, or scatter plots
What's normal? — understand normal distribution and probability
Hyping hypotheses — learn to use hypothesis testing with means and variables
When regression is progress — discover when and how to use regression for forecasting
What are the odds — work with probability, random variables, and binomial distribution
Open the book and find: Ten statistical and graphical tips and traps
The difference between descriptive and inferential statistics
Why graphs are good
How to measure variations
What standard scores are and why they're used
When to use two-sample hypothesis testing
How to use correlations
Different ways of working with probability

Given the improved analytical capabilities of Excel, scientists and engineers everywhere are using it--instead of FORTRAN--to solve problems. And why not? Excel is installed on millions of computers, features a rich set of built-in analyses tools, and includes an integrated Visual Basic for Applications (VBA) programming language. No wonder it's today's computing tool of choice.

Chances are you already use Excel to perform some fairly routine calculations. Now the Excel Scientific and Engineering Cookbook shows you how to leverage Excel to perform more complex calculations, too, calculations that once fell in the domain of specialized tools. It does so by putting a smorgasbord of data analysis techniques right at your fingertips. The book shows how to perform these useful tasks and others: Use Excel and VBA in general
Import data from a variety of sources
Analyze data
Perform calculations
Visualize the results for interpretation and presentation
Use Excel to solve specific science and engineering problems
Wherever possible, the Excel Scientific and Engineering Cookbook draws on real-world examples from a range of scientific disciplines such as biology, chemistry, and physics. This way, you'll be better prepared to solve the problems you face in your everyday scientific or engineering tasks. High on practicality and low on theory, this quick, look-up reference provides instant solutions, or "recipes," to problems both basic and advanced. And like other books in O'Reilly's popular Cookbook format, each recipe also includes a discussion on how and why it works. As a result, you can take comfort in knowing that complete, practical answers are a mere page-flip away.

Get complete instructions for manipulating, processing, cleaning, and crunching datasets in Python. Updated for Python 3.6, the second edition of this hands-on guide is packed with practical case studies that show you how to solve a broad set of data analysis problems effectively. You'll learn the latest versions of pandas, NumPy, IPython, and Jupyter in the process. Written by Wes McKinney, the creator of the Python pandas project, this book is a practical, modern introduction to data science tools in Python. It's ideal for analysts new to Python and for Python programmers new to data science and scientific computing. Data files and related material are available on GitHub. Use the IPython shell and Jupyter notebook for exploratory computing
Learn basic and advanced features

in NumPy (Numerical Python) Get started with data analysis tools in the pandas library Use flexible tools to load, clean, transform, merge, and reshape data Create informative visualizations with matplotlib Apply the pandas groupby facility to slice, dice, and summarize datasets Analyze and manipulate regular and irregular time series data Learn how to solve real-world data analysis problems with thorough, detailed examples

The majority of professors have never had a formal course in education, and the most common method for learning how to teach is on-the-job training. This represents a challenge for disciplines with ever more complex subject matter, and a lost opportunity when new active learning approaches to education are yielding dramatic improvements in student learning and retention. This book aims to cover all aspects of teaching engineering and other technical subjects. It presents both practical matters and educational theories in a format useful for both new and experienced teachers. It is organized to start with specific, practical teaching applications and then leads to psychological and educational theories. The "practical orientation" section explains how to develop objectives and then use them to enhance student learning, and the "theoretical orientation" section discusses the theoretical basis for learning/teaching and its impact on students. Written mainly for PhD students and professors in all areas of engineering, the book may be used as a text for graduate-level classes and professional workshops or by professionals who wish to read it on their own. Although the focus is engineering education, most of this book will be useful to teachers in other disciplines. Teaching is a complex human activity, so it is impossible to develop a formula that guarantees it will be excellent. However, the methods in this book will help all professors become good teachers while spending less time preparing for the classroom. This is a new edition of the well-received volume published by McGraw-Hill in 1993. It includes an entirely revised section on the Accreditation Board for Engineering and Technology (ABET) and new sections on the characteristics of great teachers, different active learning methods, the application of technology in the classroom (from clickers to intelligent tutorial systems), and how people learn.

Do you use Excel for simple lists, but get confused and frustrated when it comes to actually doing something useful with all that data? Stop tearing your hair out: Head First Excel helps you painlessly move from spreadsheet dabbler to savvy user. Whether you're completely new to Excel or an experienced user looking to make the program work better for you, this book will help you incorporate Excel into every aspect of your workflow, from a scratch pad for data-based brainstorming to exploratory analysis with PivotTables, optimizing outcomes with Goal Seek, and presenting your conclusions with sophisticated data visualizations. Organize and clearly present information in a spreadsheet Make calculations across a number of worksheets Change your point of view with sorting, zooming, and filtering Manipulate numerical data to extract and use just what you need Leverage Excel as a grid-based layout program Write formulas for

optimal functionality Nest formulas for more complex operations Create sophisticated data visualizations with charts and graphs Use Goal Seek to optimize possible outcomes based on different assumptions Create summaries from large data sets for exploratory data analysis with PivotTables We think your time is too valuable to waste struggling with new concepts. Using the latest research in cognitive science and learning theory to craft a multi-sensory learning experience, Head First Excel uses a visually rich format designed for the way your brain works, rather than a text-heavy approach that will put you to sleep. Completely updated guide for students, scientists and engineers who want to use Microsoft Excel 2013 to its full potential. Electronic spreadsheet analysis has become part of the everyday work of researchers in all areas of engineering and science. Microsoft Excel, as the industry standard spreadsheet, has a range of scientific functions that can be utilized for the modeling, analysis and presentation of quantitative data. This text provides a straightforward guide to using these functions of Microsoft Excel, guiding the reader from basic principles through to more complicated areas such as formulae, charts, curve-fitting, equation solving, integration, macros, statistical functions, and presenting quantitative data. Content written specifically for the requirements of science and engineering students and professionals working with Microsoft Excel, brought fully up to date with the new Microsoft Office release of Excel 2013. Features of Excel 2013 are illustrated through a wide variety of examples based in technical contexts, demonstrating the use of the program for analysis and presentation of experimental results. New to this edition: The Backstage is introduced (a new Office 2013 feature); all the 'external' operations like Save, Print etc. are now in one place The chapter on charting is totally revised and updated – Excel 2013 differs greatly from earlier versions Includes many new end-of-chapter problems Most chapters have been edited to improve readability

This book is an introduction to methods for solving partial differential equations (PDEs). After the introduction of the main four PDEs that could be considered the cornerstone of Applied Mathematics, the reader is introduced to a variety of PDEs that come from a variety of fields in the Natural Sciences and Engineering and is a springboard into this wonderful subject. The chapters include the following topics: First-order PDEs, Second-order PDEs, Fourier Series, Separation of Variables, and the Fourier Transform. The reader is guided through these chapters where techniques for solving first- and second-order PDEs are introduced. Each chapter ends with a series of exercises illustrating the material presented in each chapter. The book can be used as a textbook for any introductory course in PDEs typically found in both science and engineering programs and has been used at the University of Central Arkansas for over ten years.

The accompanying CD-ROM features ready-to-run, customizable Excel worksheets derived from the book examples, which will be useful tools to add to any electronics engineer's spreadsheet toolbox. Engineers are looking for any and all means to

increase their efficiency and add to their "bag of design tricks." Just about every electronics engineer uses Excel but most feel that the program has many more features to offer, if they only knew what they were! The Excel documentation is voluminous and electronics engineers don't have the time to read it all and sift through looking for those features that are directly applicable to their jobs and figure out how to use them. This book does that task for them-pulls out those features that they need to know about and shows them how to make use of them in specific design examples that they can then tailor to their own design needs.-

While teaching the Numerical Methods for Engineers course over the last 15 years, the author found a need for a new textbook, one that was less elementary, provided applications and problems better suited for chemical engineers, and contained instruction in Visual Basic® for Applications (VBA). This led to six years of developing teaching notes that have been enhanced to create the current textbook, Numerical Methods for Chemical Engineers Using Excel®, VBA, and MATLAB®. Focusing on Excel gives the advantage of it being generally available, since it is present on every computer—PC and Mac—that has Microsoft Office installed. The VBA programming environment comes with Excel and greatly enhances the capabilities of Excel spreadsheets. While there is no perfect programming system, teaching this combination offers knowledge in a widely available program that is commonly used (Excel) as well as a popular academic software package (MATLAB). Chapters cover nonlinear equations, Visual Basic, linear algebra, ordinary differential equations, regression analysis, partial differential equations, and mathematical programming methods. Each chapter contains examples that show in detail how a particular numerical method or programming methodology can be implemented in Excel and/or VBA (or MATLAB in chapter 10). Most of the examples and problems presented in the text are related to chemical and biomolecular engineering and cover a broad range of application areas including thermodynamics, fluid flow, heat transfer, mass transfer, reaction kinetics, reactor design, process design, and process control. The chapters feature "Did You Know" boxes, used to remind readers of Excel features. They also contain end-of-chapter exercises, with solutions provided.

Microsoft Excel has, over the years, become the greatest software in the field of electronic worksheets. Its strength is that it meets the demands of huge numbers of users worldwide. Nonetheless - despite the advancement and expanding use of this software - there is ever-increasing demand from the end users; much of which can only be solved by VBA programming (Visual Basic for Applications). Therefore, "Excel VBA - In Everyday Language" was written in order to provide a response to the growing demand for the advanced capabilities of Microsoft Excel. This book was written: * For the "non-programmers" among us who have to create the same reports in Microsoft Excel time and again, and would like to automate the process. * For people who wish to develop forms, screens and "machines" for data management within their organization. * For individuals who wish to turn Microsoft Excel into a powerful tool in their daily work. During the writing process I tried to visualize Microsoft Excel software and the VB editor through the eyes of the end users; people who may not have programming background, but aspire to reap the utmost from the program. For this reason the book, based on many years' of experience in programming and training, has been written in everyday language, using as few technical terms as possible, to make for easy reading. My goal,

when writing this book, was to convey the main principles of VBA language and allow beginners, taking their first steps, to learn without requiring individual training. For this purpose there are files of exercises accompanying the book. These may be downloaded from this link. The exercise files are in .xls format, allowing the end users to use either the "Ribbon Versions" (2007 and higher) or other older versions of Microsoft Excel. This new edition has undergone extensive processing and addresses Microsoft Excel 2010/2013 users, along with explanations for anyone using the older versions (2003 and 2007). Therefore, wherever there is a significant difference between Excel 2010/2013 and the old versions, explanations are provided in full. While reading the book and using the practice files, you will know to: * Add the Developer Tab * Change Excel's security, Including trusted locations * Enter the VBE (Visual Basic Editor) * Change the VBE structure * Record an absolute macro * Record a relative macro * Improve your recorded macro * Apply to ranges (Cells, ranges, columns, rows, sheets, offset) * Use Variables * Use the 'With' command * Manipulate strings * Calculate Date and Time * Interact with the user (Msgbox and Inputbox) * Use conditions (IF) * Loop through data (Do loops, For loops) * Create your own functions (UDF) * Create an Event macro * Handle Errors You will also learn some cool tips and tricks, and get some useful codes

This latest edition expands Practical Numerical Methods (PNM) with more VBA to boost Excel's power for modeling and analysis using the same numerical techniques found in specialized math software. Visit the companion web site for more details and additional content: www.d.umn.edu/~rdavis/PNM Download the book's Excel and VBA files and learn how to customize your own Excel workbooks: Get the PNMSuite A refined macro-enabled Excel workbook with a suite of over 200 VBA user-defined functions, macros, and user-forms for learning VBA and implementing advanced numerical methods in Excel. Work through the hundreds of examples, illustrations, and animations from the book available in downloadable Excel files that demonstrate applied numerical methods in Excel. Customize the example Excel worksheets and VBA code to tackle your own problems. Try the practice problems for a self-guided study to sharpen your Excel and VBA skills. The first chapter sets up the background for practical problem solving using numerical methods. The next two chapters cover frequently overlooked features of Excel and VBA for implementing numerical methods in Excel and documenting results. The remaining chapters present powerful numerical techniques using Excel and VBA to find roots to individual and systems of linear and nonlinear equations, evaluate derivatives, perform optimization, model data by regression and interpolation, assess model fidelity, analyze risk and uncertainty, perform integration, and solve ordinary and partial differential equations. This new edition builds on the success of previous editions with 20% new content and updated features in the latest editions of Excel!

A guide for data managers and analyzers shares guidelines for identifying patterns, predicting future outcomes, and presenting findings to others; drawing on current research in cognitive science and learning theory while covering such additional topics as assessing data quality, handling ambiguous information, and organizing data within market groups. Original.

Excel Scientific and Engineering Cookbook Adding Excel to Your Analysis Arsenal"O'Reilly Media, Inc."

Excel is by far the most widely distributed data analysis software but few users are

aware of its full powers. *Advanced Excel For Scientific Data Analysis* takes off from where most books dealing with scientific applications of Excel end. It focuses on three areas-least squares, Fourier transformation, and digital simulation-and illustrates these with extensive examples, often taken from the literature. It also includes and describes a number of sample macros and functions to facilitate common data analysis tasks. These macros and functions are provided in uncompiled, computer-readable, easily modifiable form; readers can therefore use them as starting points for making their own personalized data analysis tools. Detailed descriptions and sample applications of standard and specialized uses of least squares for fitting data to a variety of functions, including resolving multi-component spectra; standard processes such as calibration curves and extrapolation; custom macros for general "error" propagation, standard deviations of Solver results, weighted or equidistant least squares, Gram-Schmidt orthogonalization, Fourier transformation, convolution and deconvolution, time-frequency analysis, and data mapping. There are also worked examples showing how to use centering, the covariance matrix, imprecision contours, and Wiener filtering and custom functions for bisections, Lagrange interpolation, Euler and Runge-Kutta integration.

Provides instruction on using Excel including how to build spreadsheets, add and format information, print reports, create charts and graphics, and use basic formulas and functions

Providing a much-needed bridge between elementary statistics courses and advanced research methods courses, *Understanding Advanced Statistical Methods* helps students grasp the fundamental assumptions and machinery behind sophisticated statistical topics, such as logistic regression, maximum likelihood, bootstrapping, nonparametrics, and Bayesian methods. The book teaches students how to properly model, think critically, and design their own studies to avoid common errors. It leads them to think differently not only about math and statistics but also about general research and the scientific method. With a focus on statistical models as producers of data, the book enables students to more easily understand the machinery of advanced statistics. It also downplays the "population" interpretation of statistical models and presents Bayesian methods before frequentist ones. Requiring no prior calculus experience, the text employs a "just-in-time" approach that introduces mathematical topics, including calculus, where needed. Formulas throughout the text are used to explain why calculus and probability are essential in statistical modeling. The authors also intuitively explain the theory and logic behind real data analysis, incorporating a range of application examples from the social, economic, biological, medical, physical, and engineering sciences. Enabling your students to answer the why behind statistical methods, this text teaches them how to successfully draw conclusions when the premises are flawed. It empowers them to use advanced statistical methods with confidence and develop their own statistical recipes.

Ancillary materials are available on the book's website.

Master VBA automation quickly and easily to get more out of Excel *Excel VBA 24-Hour Trainer, 2nd Edition* is the quick-start guide to getting more out of Excel, using Visual Basic for Applications. This unique book/video package has been updated with fifteen new advanced video lessons, providing a total of eleven hours of video training and 45 total lessons to teach you the basics and beyond. This self-paced tutorial explains Excel VBA from the ground up, demonstrating with each advancing lesson how you can increase your productivity. Clear, concise, step-by-step instructions are combined with illustrations, code examples, and downloadable workbooks to give you a practical, in-depth learning experience and results that apply to real-world scenarios. This is your comprehensive guide to becoming a true Excel

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poweruser, with multimedia instruction and plenty of hands-on practice. Program Excel's newest chart and pivot table object models Manipulate the user interface to customize the look and feel of a project Utilize message boxes, input boxes, and loops to yield customized logical results Interact with and manipulate Word, Access, PowerPoint, and Outlook from Excel If you're ready to get more out of this incredibly functional program, Excel VBA 24-Hour Trainer, 2nd Edition provides the expert instruction and fast, hands-on learning you need.

Success in data science depends on the flexible and appropriate use of tools. That includes Python and R, two of the foundational programming languages in the field. This book guides data scientists from the Python and R communities along the path to becoming bilingual. By recognizing the strengths of both languages, you'll discover new ways to accomplish data science tasks and expand your skill set. Authors Rick Scavetta and Boyan Angelov explain the parallel structures of these languages and highlight where each one excels, whether it's their linguistic features or the powers of their open source ecosystems. You'll learn how to use Python and R together in real-world settings and broaden your job opportunities as a bilingual data scientist. Learn Python and R from the perspective of your current language Understand the strengths and weaknesses of each language Identify use cases where one language is better suited than the other Understand the modern open source ecosystem available for both, including packages, frameworks, and workflows Learn how to integrate R and Python in a single workflow Follow a case study that demonstrates ways to use these languages together Take the guesswork out of deploying, administering, and automating Active Directory. With hundreds of proven recipes, the updated edition of this popular cookbook provides quick, step-by-step solutions to common (and not so common) problems you might encounter when working with Microsoft's network directory service. This fourth edition includes troubleshooting recipes for Windows Server 2012, Windows 8, and Exchange 2013, based on valuable input from Windows administrators. You'll also find quick solutions for the Lightweight Directory Access Protocol (LDAP), Active Directory Lightweight Directory Services (AD LDS), multi-master replication, DNS, Group Policy, and many other features. Manage new AD features, such as the Recycle Bin, Group Managed Service Accounts, and fine-grained password policies Work with AD from the command line and use Windows PowerShell to automate tasks Remove and create forests, domains, and trusts Create groups, modify group scope and type, and manage membership Delegate control, view and modify permissions, and handle Kerberos tickets Import and export data with LDAP Data Interchange Format (LDIF) Synchronize multiple directories and enforce data integrity within a single or multiple stores Back up AD, and perform authoritative and non-authoritative restores

Millions of users create and share Excel spreadsheets every day, but few go deeply enough to learn the techniques that will make their work much easier. There are many ways to take advantage of Excel's advanced capabilities without spending hours on advanced study. Excel Hacks provides more than 130 hacks -- clever tools, tips and techniques -- that will leapfrog your work beyond the ordinary. Now expanded to include Excel 2007, this resourceful, roll-up-your-sleeves guide gives you little known "backdoor" tricks for several Excel versions using different platforms and external applications. Think of this book as a toolbox. When a need arises or a problem occurs, you can simply use the right tool for the job. Hacks are grouped into chapters so you can find what you need quickly, including ways to: Reduce workbook and worksheet frustration -- manage how users interact with worksheets, find and highlight information, and deal with debris and corruption. Analyze and manage data -- extend and automate these features, moving beyond the limited tasks they were designed to perform. Hack names -- learn not only how to name cells and ranges, but also how to create names that adapt to the data in your spreadsheet. Get the most out of PivotTables -- avoid the problems that make them frustrating and learn how to extend them. Create customized charts -- tweak and combine Excel's built-in charting capabilities. Hack formulas and functions -- subjects

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range from moving formulas around to dealing with datatype issues to improving recalculation time. Make the most of macros -- including ways to manage them and use them to extend other features. Use the enhanced capabilities of Microsoft Office 2007 to combine Excel with Word, Access, and Outlook. You can either browse through the book or read it from cover to cover, studying the procedures and scripts to learn more about Excel. However you use it, Excel Hacks will help you increase productivity and give you hours of "hacking" enjoyment along the way.

In this basic introduction, the author aims to help engineers and scientists to understand and use Excel in their fields. The book is interactive and designed to be used in conjunction with a computer, to provide a hands-on learning experience.

Learn to fully harness the power of Microsoft Excel(r) to perform scientific and engineering calculations. With this text as your guide, you can significantly enhance Microsoft Excel's(r) capabilities to execute the calculations needed to solve a variety of chemical, biochemical, physical, engineering, biological, and medicinal problems. The text begins with two chapters that introduce you to Excel's Visual Basic for Applications (VBA) programming language, which allows you to expand Excel's(r) capabilities, although you can still use the text without learning VBA. Following the author's step-by-step instructions, here are just a few of the calculations you learn to perform: * Use worksheet functions to work with matrices * Find roots of equations and solve systems of simultaneous equations * Solve ordinary differential equations and partial differential equations * Perform linear and non-linear regression * Use random numbers and the Monte Carlo method. This text is loaded with examples ranging from very basic to highly sophisticated solutions. More than 100 end-of-chapter problems help you test and put your knowledge to practice solving real-world problems. Answers and explanatory notes for most of the problems are provided in an appendix. The CD-ROM that accompanies this text provides several useful features: * All the spreadsheets, charts, and VBA code needed to perform the examples from the text * Solutions to most of the end-of-chapter problems * An add-in workbook with more than twenty custom functions. This text does not require any background in programming, so it is suitable for both undergraduate and graduate courses. Moreover, practitioners in science and engineering will find that this guide saves hours of time by enabling them to perform most of their calculations with one familiar spreadsheet package.

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