

# **R For Excel Users An Introduction To R For Excel Ysts**

Summary Beyond Spreadsheets with R shows you how to take raw data and transform it for use in computations, tables, graphs, and more. You'll build on simple programming techniques like loops and conditionals to create your own custom functions. You'll come away with a toolkit of strategies for analyzing and visualizing data of all sorts using R and RStudio. Purchase of the

print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Spreadsheets are powerful tools for many tasks, but if you need to interpret, interrogate, and present data, they can feel like the wrong tools for the task. That's when R programming is the way to go. The R programming language provides a comfortable environment to properly handle all types of data. And within the open source RStudio development suite, you have at your fingertips easy-to-use ways to simplify complex

manipulations and create reproducible processes for analysis and reporting. About the Book With Beyond Spreadsheets with R you'll learn how to go from raw data to meaningful insights using R and RStudio. Each carefully crafted chapter covers a unique way to wrangle data, from understanding individual values to interacting with complex collections of data, including data you scrape from the web. You'll build on simple programming techniques like loops and conditionals to create your own custom functions. You'll come away with a toolkit of strategies for analyzing and visualizing data

of all sorts. What's inside How to start programming with R and RStudio Understanding and implementing important R structures and operators Installing and working with R packages Tidying, refining, and plotting your data About the Reader If you're comfortable writing formulas in Excel, you're ready for this book. About the Author Dr Jonathan Carroll is a data science consultant providing R programming services. He holds a PhD in theoretical physics. Table of Contents Introducing data and the R language Getting to know R data types Making new data

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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).

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calculations that are usually automated. This unique computational approach ensures that readers understand enough of the details to make reasonable choices and interpretations in their own modeling work. The text presents generalized linear multilevel models from a Bayesian perspective, relying on a simple logical interpretation of Bayesian probability and maximum entropy. It covers from the basics of regression to multilevel models. The author also discusses measurement error, missing data, and Gaussian process models for spatial and network

autocorrelation. By using complete R code examples throughout, this book provides a practical foundation for performing statistical inference. Designed for both PhD students and seasoned professionals in the natural and social sciences, it prepares them for more advanced or specialized statistical modeling. Web Resource The book is accompanied by an R package (rethinking) that is available on the author's website and GitHub. The two core functions (map and map2stan) of this package allow a variety of statistical models to be constructed from standard

model formulas.

R has a steep learning curve and, if taken in all at once, it can be overwhelming. But we can tame this curve by putting aside visualizations and analysis, and focusing on working with data.

This book is all about data manipulation: importing, creating, modifying, filtering, summarizing and reshaping data sets. You will also go deep on the building blocks of R: vectors and functions. The language is simplified and technical lingo is kept to a minimum. You will see analogies to Excel where applicable, to ease your understanding of concepts.

Supplemental articles and videos  
can be found at

[rforexcelusers.com](http://rforexcelusers.com)

Big Data Analytics with R  
From Excel to Python and R  
Excel Hacks

R for Microsoft® Excel Users  
Beyond Spreadsheets with R  
Statistical Analysis with Excel  
For Dummies

bookdown: Authoring Books and  
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Markdown presents a much  
easier way to write books and  
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syntax and flexibility for data

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analysis from R Markdown, and extends R Markdown for technical writing, so that you can make better use of document elements such as figures, tables, equations, theorems, citations, and references. Similar to LaTeX, you can number and cross-reference these elements with bookdown. Your document can even include live examples so readers can interact with them while reading the book. The book can be rendered to multiple output formats, including LaTeX/PDF, HTML, EPUB, and Word, thus making it easy to put your documents online. The style and theme of these output

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bookdown and R Markdown, and its source is fully available on GitHub.

Over 85 recipes to help you complete real-world data science projects in R and Python About This Book Tackle every step in the data science pipeline and use it to acquire, clean, analyze, and visualize your data Get beyond the theory and implement real-world projects in data science using R and Python Easy-to-follow recipes will help you understand and implement the numerical computing concepts Who This Book Is For If you are an aspiring data scientist who wants to learn data science

and numerical programming concepts through hands-on, real-world project examples, this is the book for you. Whether you are brand new to data science or you are a seasoned expert, you will benefit from learning about the structure of real-world data science projects and the programming examples in R and Python. What You Will Learn

- Learn and understand the installation procedure and environment required for R and Python on various platforms
- Prepare data for analysis by implement various data science concepts such as acquisition, cleaning and munging through R

and Python Build a predictive model and an exploratory model Analyze the results of your model and create reports on the acquired data Build various tree-based methods and Build random forest In Detail As increasing amounts of data are generated each year, the need to analyze and create value out of it is more important than ever. Companies that know what to do with their data and how to do it well will have a competitive advantage over companies that don't. Because of this, there will be an increasing demand for people that possess both the analytical and technical abilities

to extract valuable insights from data and create valuable solutions that put those insights to use. Starting with the basics, this book covers how to set up your numerical programming environment, introduces you to the data science pipeline, and guides you through several data projects in a step-by-step format. By sequentially working through the steps in each chapter, you will quickly familiarize yourself with the process and learn how to apply it to a variety of situations with examples using the two most popular programming languages for data analysis—R and Python. Style

and approach This step-by-step guide to data science is full of hands-on examples of real-world data science tasks. Each recipe focuses on a particular task involved in the data science pipeline, ranging from readying the dataset to analytics and visualization

In this book, the authors build on RExcel, a free add-in for Excel that can be downloaded from the R distribution network. RExcel seamlessly integrates the entire set of R's statistical and graphical methods into Excel, allowing students to focus on statistical methods and concepts and minimizing the distraction of

learning a new programming language.

Master the programming language of choice among statisticians and data analysts worldwide. Coming to grips with R can be tough, even for seasoned statisticians and data analysts. Enter *R For Dummies*, the quick, easy way to master all the R you'll ever need. Requiring no prior programming experience and packed with practical examples, easy, step-by-step exercises, and sample code, this extremely accessible guide is the ideal introduction to R for complete beginners. It also covers many concepts that

intermediate-level programmers will find extremely useful. Master your R ABCs ? get up to speed in no time with the basics, from installing and configuring R to writing simple scripts and performing simultaneous calculations on many variables Put data in its place ? get to know your way around lists, data frames, and other R data structures while learning to interact with other programs, such as Microsoft Excel Make data dance to your tune ? learn how to reshape and manipulate data, merge data sets, split and combine data, perform calculations on vectors and

arrays, and much more Visualize it ? learn to use R's powerful data visualization features to create beautiful and informative graphical presentations of your data Get statistical ? find out how to do simple statistical analysis, summarize your variables, and conduct classic statistical tests, such as t-tests Expand and customize R ? get the lowdown on how to find, install, and make the most of add-on packages created by the global R community for a wide variety of purposes Open the book and find: Help downloading, installing, and configuring R Tips for getting data in and out of R



Ways to use data frames and lists to organize data  
How to manipulate and process data  
Advice on fitting regression models and ANOVA  
Helpful hints for working with graphics  
How to code in R  
What R mailing lists and forums can do for you  
Python for Excel  
The Book of R  
A Spreadsheet Interface for Statistics, Data Analysis, and Graphics  
Python and R for the Modern Data Scientist  
Learning R  
Quantifying the User Experience  
Understanding the world of R programming and analysis has

never been easier Most guides to R, whether books or online, focus on R functions and procedures. But now, thanks to *Statistical Analysis with R For Dummies*, you have access to a trusted, easy-to-follow guide that focuses on the foundational statistical concepts that R addresses—as well as step-by-step guidance that shows you exactly how to implement them using R programming. People are becoming more aware of R every day as major institutions are adopting it as a standard. Part of its appeal is that it's a free tool that's taking the place of costly

statistical software packages that sometimes take an inordinate amount of time to learn. Plus, R enables a user to carry out complex statistical analyses by simply entering a few commands, making sophisticated analyses available and understandable to a wide audience.

Statistical Analysis with R For Dummies enables you to perform these analyses and to fully understand their implications and results. Gets you up to speed on the #1 analytics/data science software tool Demonstrates how to easily find, download, and use cutting-edge community-reviewed

methods in statistics and predictive modeling Shows you how R offers intel from leading researchers in data science, free of charge Provides information on using R Studio to work with R Get ready to use R to crunch and analyze your data—the fast and easy way!

"Statistical Inference via Data Science: A Modern Dive into R and the Tidyverse provides a pathway for learning about statistical inference using data science tools widely used in industry, academia, and government. It introduces the tidyverse suite of R packages, including the ggplot2 package for data

visualization, and the dplyr package for data wrangling. After equipping readers with just enough of these data science tools to perform effective exploratory data analyses, the book covers traditional introductory statistics topics like confidence intervals, hypothesis testing, and multiple regression modeling, while focusing on visualization throughout"--

Doing Meta-Analysis with R: A Hands-On Guide serves as an accessible introduction on how meta-analyses can be conducted in R. Essential steps for meta-analysis are covered, including calculation and pooling of

outcome measures, forest plots, heterogeneity diagnostics, subgroup analyses, meta-regression, methods to control for publication bias, risk of bias assessments and plotting tools. Advanced but highly relevant topics such as network meta-analysis, multi-three-level meta-analyses, Bayesian meta-analysis approaches and SEM meta-analysis are also covered. A companion R package, *dmetar*, is introduced at the beginning of the guide. It contains data sets and several helper functions for the meta and metafor package used in the guide. The programming and

statistical background covered in the book are kept at a non-expert level, making the book widely accessible. Features • Contains two introductory chapters on how to set up an R environment and do basic imports/manipulations of meta-analysis data, including exercises • Describes statistical concepts clearly and concisely before applying them in R • Includes step-by-step guidance through the coding required to perform meta-analyses, and a companion R package for the book

Data analytics may seem daunting, but if you're an

experienced Excel user, you have a unique head start. With this hands-on guide, intermediate Excel users will gain a solid understanding of analytics and the data stack. By the time you complete this book, you'll be able to conduct exploratory data analysis and hypothesis testing using a programming language. Exploring and testing relationships are core to analytics. By using the tools and frameworks in this book, you'll be well positioned to continue learning more advanced data analysis techniques. Author George Mount, founder and CEO of Stringfest Analytics,



demonstrates key statistical concepts with spreadsheets, then pivots your existing knowledge about data manipulation into R and Python programming. This practical book guides you through: Foundations of analytics in Excel: Use Excel to test relationships between variables and build compelling demonstrations of important concepts in statistics and analytics From Excel to R: Cleanly transfer what you've learned about working with data from Excel to R From Excel to Python: Learn how to pivot your Excel data chops into Python and conduct a complete data analysis

Excel and R Companion to  
"Quantifying the User  
Experience-- Practical  
Statistics for User Research  
With Examples in R and  
Python  
Tips & Tools for  
Streamlining Your  
Spreadsheets  
R Through Excel  
Hands-On Programming with R  
Advanced Analytics and  
Graphics

**The second edition of a  
bestselling textbook, Using R for  
Introductory Statistics guides  
students through the basics of R,  
helping them overcome the  
sometimes steep learning curve.  
The author does this by breaking  
the material down into small,  
task-oriented steps. The second**

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**edition maintains the features that made the first edition so popular, while updating data, examples, and changes to R in line with the current version. See What's New in the Second Edition: Increased emphasis on more idiomatic R provides a grounding in the functionality of base R. Discussions of the use of RStudio helps new R users avoid as many pitfalls as possible. Use of knitr package makes code easier to read and therefore easier to reason about. Additional information on computer-intensive approaches motivates the traditional approach. Updated examples and data make the information current and topical. The book has an accompanying package, UsingR, available from**

**CRAN, R's repository of user-contributed packages. The package contains the data sets mentioned in the text (data(package="UsingR")), answers to selected problems (answers()), a few demonstrations (demo()), the errata (errata()), and sample code from the text. The topics of this text line up closely with traditional teaching progression; however, the book also highlights computer-intensive approaches to motivate the more traditional approach. The authors emphasize realistic data and examples and rely on visualization techniques to gather insight. They introduce statistics and R seamlessly, giving students the tools they need to use R and the**

**information they need to navigate the sometimes complex world of statistical computing.**

**Update your data science skills by learning R. Learn how common data analysis and statistics operations are run in Excel vs. R and how to move data back and forth between each program.**

**Statistical Computation for Programmers, Scientists, Quants, Excel Users, and Other Professionals Using the open source R language, you can build powerful statistical models to answer many of your most challenging questions. R has traditionally been difficult for non-statisticians to learn, and most R books assume far too much knowledge to be of help. R for Everyone, Second Edition, is**

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**the solution. Drawing on his unsurpassed experience teaching new users, professional data scientist Jared P. Lander has written the perfect tutorial for anyone new to statistical programming and modeling. Organized to make learning easy and intuitive, this guide focuses on the 20 percent of R functionality you'll need to accomplish 80 percent of modern data tasks. Lander's self-contained chapters start with the absolute basics, offering extensive hands-on practice and sample code. You'll download and install R; navigate and use the R environment; master basic program control, data import, manipulation, and visualization; and walk through several**

**essential tests. Then, building on this foundation, you'll construct several complete models, both linear and nonlinear, and use some data mining techniques. After all this you'll make your code reproducible with LaTeX, RMarkdown, and Shiny. By the time you're done, you won't just know how to write R programs, you'll be ready to tackle the statistical problems you care about most. Coverage includes Explore R, RStudio, and R packages Use R for math: variable types, vectors, calling functions, and more Exploit data structures, including data.frames, matrices, and lists Read many different types of data Create attractive, intuitive statistical graphics Write user-**

**defined functions Control  
program flow with if, ifelse, and  
complex checks Improve program  
efficiency with group  
manipulations Combine and  
reshape multiple datasets  
Manipulate strings using R's  
facilities and regular expressions  
Create normal, binomial, and  
Poisson probability distributions  
Build linear, generalized linear,  
and nonlinear models Program  
basic statistics: mean, standard  
deviation, and t-tests Train  
machine learning models Assess  
the quality of models and variable  
selection Prevent overfitting and  
perform variable selection, using  
the Elastic Net and Bayesian  
methods Analyze univariate and  
multivariate time series data  
Group data via K-means and**



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**"Write Your Own Functions and Simulations."--Cover.**

**Advancing into Analytics**

**Data Collection, Exploration, Analysis and Presentation**

**A Step-by-Step Function Guide to Data Analysis**

**A Hands-On Guide**

**Excel, VBA and R**

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## **Using R for Introductory Statistics**

Quantifying the User Experience: Practical Statistics for User Research offers a practical guide for using statistics to solve quantitative problems in user research. Many designers and researchers view usability and design as qualitative activities, which do not require attention to formulas and numbers. However, usability practitioners and user researchers are increasingly expected to quantify the benefits of their efforts. The impact of good and bad designs can be quantified in terms of conversions, completion rates, completion times, perceived satisfaction,

recommendations, and sales. The book discusses ways to quantify user research; summarize data and compute margins of error; determine appropriate sample sizes; standardize usability questionnaires; and settle controversies in measurement and statistics. Each chapter concludes with a list of key points and references. Most chapters also include a set of problems and answers that enable readers to test their understanding of the material. This book is a valuable resource for those engaged in measuring the behavior and attitudes of people during their interaction with interfaces. Provides practical guidance on

solving usability testing problems with statistics for any project, including those using Six Sigma practices Show practitioners which test to use, why they work, best practices in application, along with easy-to-use excel formulas and web-calculators for analyzing data Recommends ways for practitioners to communicate results to stakeholders in plain English Resources and tools available at the authors' site: <http://www.measuringu.com/> R Markdown: The Definitive Guide is the first official book authored by the core R Markdown developers that provides a comprehensive and accurate reference to the R Markdown

ecosystem. With R Markdown, you can easily create reproducible data analysis reports, presentations, dashboards, interactive applications, books, dissertations, websites, and journal articles, while enjoying the simplicity of Markdown and the great power of R and other languages. In this book, you will learn Basics: Syntax of Markdown and R code chunks, how to generate figures and tables, and how to use other computing languages Built-in output formats of R Markdown: PDF/HTML/Word/RTF/Markdown documents and ioslides/Slidy/Beamer/PowerPoint presentations Extensions and

applications: Dashboards, Tufte handouts, xaringan/reveal.js presentations, websites, books, journal articles, and interactive tutorials

Advanced topics: Parameterized reports, HTML widgets, document templates, custom output formats, and Shiny documents.

Yihui Xie is a software engineer at RStudio. He has authored and co-authored several R packages, including knitr, rmarkdown, bookdown, blogdown, shiny, xaringan, and animation. He has published three other books, Dynamic Documents with R and knitr, bookdown: Authoring Books and Technical Documents with R Markdown, and blogdown: Creating Websites with R

Markdown. J.J. Allaire is the founder of RStudio and the creator of the RStudio IDE. He is an author of several packages in the R Markdown ecosystem including `rmarkdown`, `flexdashboard`, `learnr`, and `radix`. Garrett Grolemund is the co-author of *R for Data Science* and author of *Hands-On Programming with R*. He wrote the `lubridate` R package and works for RStudio as an advocate who trains engineers to do data science with R and the Tidyverse.

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.

This is a book about the scientific process and how you apply it to data in ecology. You will learn how to plan for data collection, how to assemble data, how to analyze data and finally how to present the results. The book uses Microsoft Excel and the powerful Open Source R program to carry out data handling as well as producing graphs. Statistical approaches covered include: data exploration; tests for difference - t-test and U-test; correlation - Spearman's rank test and Pearson product-moment; association

including Chi-squared tests and goodness of fit; multivariate testing using analysis of variance (ANOVA) and Kruskal-Wallis test; and multiple regression. Key skills taught in this book include: how to plan ecological projects; how to record and assemble your data; how to use R and Excel for data analysis and graphs; how to carry out a wide range of statistical analyses including analysis of variance and regression; how to create professional looking graphs; and how to present your results. New in this edition: a completely revised chapter on graphics including graph types and their uses, Excel Chart Tools, R graphics commands and

producing different chart types in Excel and in R; an expanded range of support material online, including; example data, exercises and additional notes & explanations; a new chapter on basic community statistics, biodiversity and similarity; chapter summaries and end-of-chapter exercises. Praise for the first edition: This book is a superb way in for all those looking at how to design investigations and collect data to support their findings. - Sue Townsend, Biodiversity Learning Manager, Field Studies Council [M]akes it easy for the reader to synthesise R and Excel and there is extra help and sample data available on the

free companion webpage if needed. I recommended this text to the university library as well as to colleagues at my student workshops on R. Although I initially bought this book when I wanted to discover R I actually also learned new techniques for data manipulation and management in Excel - Mark Edwards, EcoBlogging A must for anyone getting to grips with data analysis using R and excel. - Amazon 5-star review It has been very easy to follow and will be perfect for anyone. - Amazon 5-star review A solid introduction to working with Excel and R. The writing is clear and informative, the book provides plenty of

examples and figures so that each string of code in R or step in Excel is understood by the reader. -

Goodreads, 4-star review

R for Data Science

Making the Transition for  
Statistical Analysis

Doing Meta-Analysis with R

R for Everyone

Practical Statistics for User  
Research

bookdown

Learn how to use R to turn raw data into insight, knowledge, and understanding. This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous

programming experience, R for Data Science is designed to get you doing data science as quickly as possible. Authors Hadley Wickham and Garrett Grolemund guide you through the steps of importing, wrangling, exploring, and modeling your data and communicating the results. You ' ll get a complete, big-picture understanding of the data science cycle, along with basic tools you need to manage the details. Each section of the book is paired with exercises to help you practice what you ' ve learned along the way. You ' ll learn how to:

- Wrangle—transform your datasets into a form convenient for analysis
- Program—learn powerful R tools for solving data problems with greater clarity and ease
- Explore—examine

your data, generate hypotheses,  
and quickly test them

Model—provide a low-dimensional  
summary that captures true  
"signals" in your dataset

Communicate—learn R Markdown  
for integrating prose, code, and  
results

Despite the recent rapid growth in  
machine learning and predictive  
analytics, many of the statistical  
questions that are faced by  
researchers and practitioners still  
involve explaining why something  
is happening. Regression analysis  
is the best 'swiss army knife' we  
have for answering these kinds of  
questions. This book is a learning  
resource on inferential statistics  
and regression analysis. It teaches  
how to do a wide range of  
statistical analyses in both R and in



Python, ranging from simple hypothesis testing to advanced multivariate modelling. Although it is primarily focused on examples related to the analysis of people and talent, the methods easily transfer to any discipline. The book hits a ‘ sweet spot ’ where there is just enough mathematical theory to support a strong understanding of the methods, but with a step-by-step guide and easily reproducible examples and code, so that the methods can be put into practice immediately. This makes the book accessible to a wide readership, from public and private sector analysts and practitioners to students and researchers. Key Features: • 16 accompanying datasets across a wide range of contexts (e.g.

academic, corporate, sports, marketing) • Clear step-by-step instructions on executing the analyses. • Clear guidance on how to interpret results. • Primary instruction in R but added sections for Python coders. • Discussion exercises and data exercises for each of the main chapters. • Final chapter of practice material and datasets ideal for class homework or project work.

While Excel remains ubiquitous in the business world, recent Microsoft feedback forums are full of requests to include Python as an Excel scripting language. In fact, it's the top feature requested. What makes this combination so compelling? In this hands-on guide, Felix Zumstein--creator of xlwings, a popular open source

package for automating Excel with Python--shows experienced Excel users how to integrate these two worlds efficiently. Excel has added quite a few new capabilities over the past couple of years, but its automation language, VBA, stopped evolving a long time ago. Many Excel power users have already adopted Python for daily automation tasks. This guide gets you started. Use Python without extensive programming knowledge Get started with modern tools, including Jupyter notebooks and Visual Studio code Use pandas to acquire, clean, and analyze data and replace typical Excel calculations Automate tedious tasks like consolidation of Excel workbooks and production of Excel reports Use xlwings to build

interactive Excel tools that use Python as a calculation engine  
Connect Excel to databases and CSV files and fetch data from the internet using Python code Use Python as a single tool to replace VBA, Power Query, and Power Pivot

The Book of R is a comprehensive, beginner-friendly guide to R, the world ' s most popular programming language for statistical analysis. Even if you have no programming experience and little more than a grounding in the basics of mathematics, you ' ll find everything you need to begin using R effectively for statistical analysis. You ' ll start with the basics, like how to handle data and write simple programs, before moving on to more advanced

topics, like producing statistical summaries of your data and performing statistical tests and modeling. You ' ll even learn how to create impressive data visualizations with R ' s basic graphics tools and contributed packages, like ggplot2 and ggvis, as well as interactive 3D visualizations using the rgl package. Dozens of hands-on exercises (with downloadable solutions) take you from theory to practice, as you learn:

- The fundamentals of programming in R, including how to write data frames, create functions, and use variables, statements, and loops
- Statistical concepts like exploratory data analysis, probabilities, hypothesis tests, and regression modeling, and how to

execute them in R – How to access R ' s thousands of functions, libraries, and data sets – How to draw valid and useful conclusions from your data – How to create publication-quality graphics of your results Combining detailed explanations with real-world examples and exercises, this book will provide you with a solid understanding of both statistics and the depth of R ' s functionality. Make The Book of R your doorway into the growing world of data analysis.

Advancing Into Analytics  
Handbook of Regression Modeling  
in People Analytics  
Data analysis and graphics with R  
Statistical Rethinking  
R For Dummies  
Statistical Inference Via Data

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## Science

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

This book is about programming for trading in financial market. We cover Excel (Part 1), Excel VBA (Part 2) and R (Part3) are covered. We first cover Excel that requires minimum programming technique, it is desirable to start learning it first. Then Excel VBA is covered to provide a smooth transition to more complicated R programming. In particular, students first learn how to use Excel to generate a simple trading system and this builds the foundation for the more



complicated trading system in R. Excel VBA is commonly used for computationally less demanding calculations in both academic and business world. Students are prepared to how to use them to do various financial analysis including fundamental analysis, technical analysis and time series analysis. In particular, students will learn how to write an analyst report, and create computer-aided technical trading system. R is widely used in computationally heavy financial and statistical computation. Students are prepared how to do data manipulation, conduct econometric analysis (regression, time series), plotting package, webscraping, and financial analysis. In particular, students will learn how to backtest complex trading strategy and evaluate the performance.

Learn how to perform data analysis with the R language and software environment,

even if you have little or no programming experience. With the tutorials in this hands-on guide, you'll learn how to use the essential R tools you need to know to analyze data, including data types and programming concepts. The second half of Learning R shows you real data analysis in action by covering everything from importing data to publishing your results. Each chapter in the book includes a quiz on what you've learned, and concludes with exercises, most of which involve writing R code. Write a simple R program, and discover what the language can do

Use data types such as vectors, arrays, lists, data frames, and strings Execute code conditionally or repeatedly with branches and loops Apply R add-on packages, and package your own work for others Learn how to clean data you import from a variety of sources Understand data through visualization and summary

statistics Use statistical models to pass quantitative judgments about data and make predictions Learn what to do when things go wrong while writing data analysis code

Statistical Computation for Programmers, Scientists, Quants, Excel Users, and Other Professionals Using the open source R language, you can build powerful statistical models to answer many of your most challenging questions. R has traditionally been difficult for non-statisticians to learn, and most R books assume far too much knowledge to be of help. R for Everyone is the solution. Drawing on his unsurpassed experience teaching new users, professional data scientist Jared P. Lander has written the perfect tutorial for anyone new to statistical programming and modeling. Organized to make learning easy and intuitive, this guide focuses on the 20

percent of R functionality you'll need to accomplish 80 percent of modern data tasks. Lander's self-contained chapters start with the absolute basics, offering extensive hands-on practice and sample code. You'll download and install R; navigate and use the R environment; master basic program control, data import, and manipulation; and walk through several essential tests. Then, building on this foundation, you'll construct several complete models, both linear and nonlinear, and use some data mining techniques. By the time you're done, you won't just know how to write R programs, you'll be ready to tackle the statistical problems you care about most.

**COVERAGE INCLUDES** • Exploring R, RStudio, and R packages • Using R for math: variable types, vectors, calling functions, and more • Exploiting data structures, including data.frames, matrices,

and lists • Creating attractive, intuitive statistical graphics • Writing user-defined functions • Controlling program flow with if, ifelse, and complex checks • Improving program efficiency with group manipulations • Combining and reshaping multiple datasets • Manipulating strings using R's facilities and regular expressions • Creating normal, binomial, and Poisson probability distributions • Programming basic statistics: mean, standard deviation, and t-tests • Building linear, generalized linear, and nonlinear models • Assessing the quality of models and variable selection • Preventing overfitting, using the Elastic Net and Bayesian methods • Analyzing univariate and multivariate time series data • Grouping data via K-means and hierarchical clustering • Preparing reports, slideshows, and web pages with knitr • Building reusable R packages with devtools and Rcpp • Getting involved with

the R global community  
R for SAS and SPSS Users  
Import, Tidy, Transform, Visualize, and  
Model Data  
R in Action  
Applied Financial Economics --  
Programming  
A ModernDive Into R and the Tidyverse  
R Markdown  
Data scientists who use Excel  
realize that R is emerging as the  
new standard for statistical  
wrangling (especially for larger  
data sets). This course serves as  
the perfect bridge for the many  
Excel-reliant data analysts and  
business users who need to  
update their data science skills  
by learning R. Much of the  
course focuses on how crucial

statistical tasks and operations are done in R-often with the DescTools package-as contrasted with Excel functions and Data Analysis add-in, and then scales up from there, showing the more powerful features of R. Conrad Carlberg helps you effectively toggle between both programs, moving data back and forth so you can get the best of both worlds. Learn about calculating descriptive statistics, running bivariate analyses, and more. A step-by-step guide for calculating the most common statistical procedures in user research using Excel or R. With

100 examples pulled from Quantifying the User Experience (Morgan-Kaufmann) we provide the reader with the right methods for comparing means and proportions, generating confidence intervals, finding the right sample size as well as many statistical procedures not available in common statistical packages. The procedures are relevant for small and large sample sizes.

Utilize R to uncover hidden patterns in your Big Data About This Book Perform computational analyses on Big Data to generate meaningful results Get a practical knowledge



of R programming language while working on Big Data platforms like Hadoop, Spark, H2O and SQL/NoSQL databases, Explore fast, streaming, and scalable data analysis with the most cutting-edge technologies in the market

Who This Book Is For This book is intended for Data Analysts, Scientists, Data Engineers, Statisticians, Researchers, who want to integrate R with their current or future Big Data workflows. It is assumed that readers have some experience in data analysis and understanding of data management and algorithmic

processing of large quantities of data, however they may lack specific skills related to R. What You Will Learn Learn about current state of Big Data processing using R programming language and its powerful statistical capabilities Deploy Big Data analytics platforms with selected Big Data tools supported by R in a cost-effective and time-saving manner Apply the R language to real-world Big Data problems on a multi-node Hadoop cluster, e.g. electricity consumption across various socio-demographic indicators and bike share scheme usage Explore the

compatibility of R with Hadoop, Spark, SQL and NoSQL databases, and H2O platform In Detail Big Data analytics is the process of examining large and complex data sets that often exceed the computational capabilities. R is a leading programming language of data science, consisting of powerful functions to tackle all problems related to Big Data processing. The book will begin with a brief introduction to the Big Data world and its current industry standards. With introduction to the R language and presenting its development, structure, applications in real world, and its

shortcomings. Book will progress towards revision of major R functions for data management and transformations. Readers will be introduced to Cloud based Big Data solutions (e.g. Amazon EC2 instances and Amazon RDS, Microsoft Azure and its HDInsight clusters) and also provide guidance on R connectivity with relational and non-relational databases such as MongoDB and HBase etc. It will further expand to include Big Data tools such as Apache Hadoop ecosystem, HDFS and MapReduce frameworks. Also other R compatible tools such as Apache Spark, its machine

learning library Spark MLlib, as well as H2O. Style and approach  
This book will serve as a practical guide to tackling Big Data problems using R programming language and its statistical environment. Each section of the book will present you with concise and easy-to-follow steps on how to process, transform and analyse large data sets.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Microsoft Excel can perform many statistical analyses, but

thousands of business users and analysts are now reaching its limits. R, in contrast, can perform virtually any imaginable analysis—if you can get over its learning curve. In *R for Microsoft® Excel Users*, Conrad Carlberg shows exactly how to get the most from both programs. Drawing on his immense experience helping organizations apply statistical methods, Carlberg reviews how to perform key tasks in Excel, and then guides you through reaching the same outcome in R—including which packages to install and how to access them. Carlberg offers expert advice on

when and how to use Excel, when and how to use R instead, and the strengths and weaknesses of each tool. Writing in clear, understandable English, Carlberg combines essential statistical theory with hands-on examples reflecting real-world challenges. By the time you 've finished, you 'll be comfortable using R to solve a wide spectrum of problems—including many you just couldn 't handle with Excel. • Smoothly transition to R and its radically different user interface • Leverage the R community 's immense library of packages • Efficiently move data between Excel and R • Use R 's

DescTools for descriptive statistics, including bivariate analyses • Perform regression analysis and statistical inference in R and Excel • Analyze variance and covariance, including single-factor and factorial ANOVA • Use R ' s mlogit package and glm function for Solver-style logistic regression • Analyze time series and principal components with R and Excel

The R Book

A First Course in Programming and Statistics

A Bayesian Course with Examples in R and Stan

Write Your Own Functions and Simulations

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The Definitive Guide  
Practical Data Science  
Cookbook

Mastering R has never been easier Picking up R can be tough, even for seasoned statisticians and data analysts. R For Dummies, 2nd Edition provides a quick and painless way to master all the R you'll ever need. Requiring no prior programming experience and packed with tons of practical examples, step-by-step exercises, and sample code, this friendly and accessible

guide shows you how to know your way around lists, data frames, and other R data structures, while learning to interact with other programs, such as Microsoft Excel. You'll learn how to reshape and manipulate data, merge data sets, split and combine data, perform calculations on vectors and arrays, and so much more. R is an open source statistical environment and programming language that has become very

popular in varied fields for the management and analysis of data. R provides a wide array of statistical and graphical techniques, and has become the standard among statisticians for software development and data analysis. R For Dummies, 2nd Edition takes the intimidation out of working with R and arms you with the knowledge and know-how to master the programming language of choice among

statisticians and data analysts worldwide. Covers downloading, installing, and configuring R Includes tips for getting data in and out of R Offers advice on fitting regression models and ANOVA Provides helpful hints for working with graphics R For Dummies, 2nd Edition is an ideal introduction to R for complete beginners, as well as an excellent technical reference for experienced R programmers.

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Data analytics may seem daunting, but if you're familiar with Excel, you have a head start that can help you make the leap into analytics. Advancing into Analytics will lower your learning curve. Author George Mount, founder and CEO of Stringfest Analytics, clearly and gently guides intermediate Excel users to a solid understanding of analytics and the data stack. This book demonstrates key statistical concepts

from spreadsheets and pivots your existing knowledge about data manipulation into R and Python programming. With this practical book at your side, you'll learn how to: Explore a dataset for potential research questions to check assumptions and to build hypotheses Make compelling business recommendations using inferential statistics Load, view, and write datasets using R and Python Perform common data wrangling tasks

such as sorting,  
filtering, and  
aggregating using R and  
Python Navigate and  
execute code in Jupyter  
notebooks Identify,  
install, and implement  
the most useful open  
source packages for your  
needs And more  
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 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. 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  
Statistics for

Ecologists Using R and  
Excel

Learning Statistics with  
R

R for Excel Users

A beginner's guide to R  
and RStudio

Authoring Books and  
Technical Documents with  
R Markdown

R for Microsoft Excel  
Users

**R is a powerful and free  
software system for data  
analysis and graphics,  
with over 5,000 add-on  
packages available. This  
book introduces R using  
SAS and SPSS terms with**

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**which you are already familiar. It demonstrates which of the add-on packages are most like SAS and SPSS and compares them to R's built-in functions. It steps through over 30 programs written in all three packages, comparing and contrasting the packages' differing approaches. The programs and practice datasets are available for download. The glossary defines over 50 R terms using SAS/SPSS jargon and again using R jargon.**

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**The table of contents and the index allow you to find equivalent R functions by looking up both SAS statements and SPSS commands. When finished, you will be able to import data, manage and transform it, create publication quality graphics, and perform basic statistical analyses. This new edition has updated programming, an expanded index, and even more statistical methods covered in over 25 new sections.**

**Statistical Analysis with R**

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# **For Dummies**

## **An Introduction to R for Excel Analysts**