

# Learn Ggplot2 Using Shiny App

Mastering Shiny Mastering Shiny R Markdown *Javascript for R* Learn ggplot2 Using Shiny App Outstanding User Interfaces with Shiny *bookdown* Web Application Development with R Using Shiny Geospatial Health Data Reproducible Finance with R Advanced R Web Application Development with R Using Shiny Hands-On Dashboard Development with Shiny Interactive Web-Based Data Visualization with R, plotly, and shiny *R Packages* Using Shiny to Teach Econometric Models Learn ggplot2 Using Shiny App *Learning Shiny* Web Application Development with R Using Shiny - Second Edition Learn Emotion Analysis with R Epidemics An Introduction to Statistical Learning *Deep Learning for Coders with fastai and PyTorch* Building a Second Brain Geocomputation with R Emerging Technologies for Education Web Analytics Demystified Management 3.0 *Data-Driven Security* R Markdown Cookbook Factfulness Applied Biclustering Methods for Big and High-Dimensional Data Using R Programming in Scala *Creating More Effective Graphs* Engineering Production-Grade Shiny Apps Domain-driven Design Refactoring at Scale OpenIntro Statistics Jupyter for Data Science Getting Started with Arduino

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Jupyter for Data Science Jul 26 2019 Explore the power of Jupyter and start deploying it in various contexts with the help of this highly practical, up-to-date guide About This Book\* Find an easy way to code, execute, document, and share your live code with this unique guide\* Learn to code efficient notebooks for interactive data analysis and deploy dashboards as web applications\* This example-rich guide teaches you how to use Jupyter kernels for the major players in data science-Python, R, and Julia Who This Book Is For This book is for those who are already familiar with data analytics languages such as Python, Scala, or R. It will be particularly useful for those who have used Jupyter but want to take their data analytics skills to the next level by utilizing Jupyter and other data science tools. What you will learn\* Understand all the functionalities of Jupyter Notebooks such as creating / sharing documents with code, equations, and visualizations\* Find out how to secure and share Notebooks\* Use Python, Scala, and R with multiple other packages and other web applications to build different data visualization platforms with Jupyter\* Create Jupyter Extensions to build new applications\* Develop code that is efficient and effective in the realm of data science / analysis\* Build interactive dashboards / widgets of Notebooks\* Improve the scalability and performance of Notebooks\* Use Jupyter for Machine Learning In Detail Jupyter is a very popular web application that allows you to code, analyze vast amounts of data, and create visualization, text, and rich media in a single document that can be shared across people you wish to collaborate with.

Initially designed and used for statistical analysis and creating visualizations out of data, Jupyter Notebook has become so popular among data scientists that over 150,000 Jupyter Notebooks have been created on GitHub. This book will take you a step further with notebooks and help you to build multiple data analytics platforms using Jupyter and other data science tools. You'll learn different ways to engineer your data and analyze it for different purposes using multiple Jupyter Notebooks. You'll begin by setting up a data science environment to create and share Jupyter Notebooks. You'll learn to create Jupyter Notebooks to analyze simple to complex big datasets and visualize using python packages. Further on, you'll learn to capitalize on Python's flexibility and R's structured statistical packages to accelerate your data science investigations for real-world applications. Additionally, we'll cover techniques to scale an application using Jupyter extensions for Spark and other dynamic widgets. By the end of the book, you'll have gained mastery over creating and integrating multiple notebooks, being able to secure and optimize them to perform intuitive, iterative, and robust analytics.

**Learn ggplot2 Using Shiny App Jun 28 2022** This book and app is for practitioners, professionals, researchers, and students who want to learn how to make a plot within the R environment using ggplot2, step-by-step without coding. In widespread use in the statistical communities, R is a free software language and environment for statistical programming and graphics. Many users find R to have a steep learning curve but to be extremely useful once overcome. ggplot2 is an extremely popular package tailored for producing graphics within R but which requires coding and has a steep learning curve itself, and Shiny is an open source R package that provides a web framework for building web applications using R without requiring HTML, CSS, or JavaScript. This manual—"integrating" R, ggplot2, and Shiny—introduces a new Shiny app, Learn ggplot2, that allows users to make plots easily without coding. With the Learn ggplot2 Shiny app, users can make plots using ggplot2 without having to code each step, reducing typos and error messages and allowing users to become familiar with ggplot2 code. The app makes it easy to apply themes, make multiplots (combining several plots into one plot), and download plots as PNG, PDF, or PowerPoint files with editable vector graphics. Users can also make plots on any computer or smart phone. Learn ggplot2 Using Shiny App allows users to Make publication-ready plots in minutes without coding Download plots with desired width, height, and resolution Plot and download plots in png, pdf, and PowerPoint formats, with or without R code and with editable vector graphics

**Factfulness Apr 02 2020 INSTANT NEW YORK TIMES BESTSELLER** "One of the most important books I've ever read—an indispensable guide to thinking clearly about the world." – Bill Gates "Hans Rosling tells the story of 'the secret silent miracle of human progress' as only he can. But Factfulness does much more than that. It also explains why progress is so often secret and silent and teaches readers how to see it clearly." —Melinda Gates "Factfulness by Hans Rosling, an outstanding international public health expert, is a hopeful book about the potential for human progress when we work off facts rather than our inherent biases." - Former U.S. President Barack Obama Factfulness: The stress-reducing habit of only carrying opinions for which you have strong supporting facts. When asked simple questions about global trends—what percentage of the world's population live in poverty; why the world's population is increasing; how many girls finish school—we systematically get the answers wrong. So wrong that a chimpanzee choosing answers at random will consistently outguess teachers, journalists, Nobel laureates, and investment bankers. In Factfulness, Professor of International Health and global TED phenomenon Hans Rosling, together with his two long-time collaborators, Anna and Ola, offers a radical new explanation of why this happens. They reveal the ten instincts that distort our perspective—from our tendency to divide the world into two camps (usually some version of us and them) to the way we consume media (where fear rules) to how we perceive progress (believing that most things are getting worse). Our problem is that we don't know what we don't know, and even our guesses are informed by unconscious and predictable

biases. It turns out that the world, for all its imperfections, is in a much better state than we might think. That doesn't mean there aren't real concerns. But when we worry about everything all the time instead of embracing a worldview based on facts, we can lose our ability to focus on the things that threaten us most. Inspiring and revelatory, filled with lively anecdotes and moving stories, *Factfulness* is an urgent and essential book that will change the way you see the world and empower you to respond to the crises and opportunities of the future. --- "This book is my last battle in my life-long mission to fight devastating ignorance...Previously I armed myself with huge data sets, eye-opening software, an energetic learning style and a Swedish bayonet for sword-swallowing. It wasn't enough. But I hope this book will be." Hans Rosling, February 2017.

**Geocomputation with R Oct 09 2020** Geocomputation with R is for people who want to analyze, visualize and model geographic data with open source software. It is based on R, a statistical programming language that has powerful data processing, visualization, and geospatial capabilities. The book equips you with the knowledge and skills to tackle a wide range of issues manifested in geographic data, including those with scientific, societal, and environmental implications. This book will interest people from many backgrounds, especially Geographic Information Systems (GIS) users interested in applying their domain-specific knowledge in a powerful open source language for data science, and R users interested in extending their skills to handle spatial data. The book is divided into three parts: (I) Foundations, aimed at getting you up-to-speed with geographic data in R, (II) extensions, which covers advanced techniques, and (III) applications to real-world problems. The chapters cover progressively more advanced topics, with early chapters providing strong foundations on which the later chapters build. Part I describes the nature of spatial datasets in R and methods for manipulating them. It also covers geographic data import/export and transforming coordinate reference systems. Part II represents methods that build on these foundations. It covers advanced map making (including web mapping), "bridges" to GIS, sharing reproducible code, and how to do cross-validation in the presence of spatial autocorrelation. Part III applies the knowledge gained to tackle real-world problems, including representing and modeling transport systems, finding optimal locations for stores or services, and ecological modeling. Exercises at the end of each chapter give you the skills needed to tackle a range of geospatial problems. Solutions for each chapter and supplementary materials providing extended examples are available at <https://geocompr.github.io/geocompkg/articles/>. Dr. Robin Lovelace is a University Academic Fellow at the University of Leeds, where he has taught R for geographic research over many years, with a focus on transport systems. Dr. Jakub Nowosad is an Assistant Professor in the Department of Geoinformation at the Adam Mickiewicz University in Poznan, where his focus is on the analysis of large datasets to understand environmental processes. Dr. Jannes Muenchow is a Postdoctoral Researcher in the GIScience Department at the University of Jena, where he develops and teaches a range of geographic methods, with a focus on ecological modeling, statistical geocomputing, and predictive mapping. All three are active developers and work on a number of R packages, including *stplanr*, *sabre*, and *RQGIS*.

**bookdown Apr 26 2022** *bookdown: Authoring Books and Technical Documents with R Markdown* presents a much easier way to write books and technical publications than traditional tools such as LaTeX and Word. The *bookdown* package inherits the simplicity of syntax and flexibility for data 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 formats can be customized. We used

books and R primarily for examples in this book, but bookdown is not only for books or R. Most features introduced in this book also apply to other types of publications: journal papers, reports, dissertations, course handouts, study notes, and even novels. You do not have to use R, either. Other choices of computing languages include Python, C, C++, SQL, Bash, Stan, JavaScript, and so on, although R is best supported. You can also leave out computing, for example, to write a fiction. This book itself is an example of publishing with bookdown and R Markdown, and its source is fully available on GitHub.

**R Markdown Cookbook** May 04 2020 R Markdown is a powerful tool for combining analysis and reporting into the single document in the spirit of literate programming and reproducible research. Since the birth of the rmarkdown package in early 2014, R Markdown has grown substantially from a package that supports a few output formats (such as HTML, PDF, and Word) to an extensive and diverse ecosystem that enables the creation of books, blogs, scientific articles, websites, and more. Due to its rapid success, this ecosystem is hard to learn completely meaning that R Markdown users, from novices to advanced users, likely do not know all that these packages have to offer. The R Markdown Cookbook confronts this gap by showcasing short, practical examples of wide-ranging tips and tricks to get the most out of these tools. After reading this book, you will learn how to: Enhance your R Markdown content with diagrams, citations, and dynamically generated text Streamline your workflow with child documents, code chunk references, and caching Control the formatting and layout with Pandoc markdown syntax or by writing custom HTML and LaTeX templates Utilize chunk options and hooks to fine-tune how your code is processed Switch between different language engines to seamlessly incorporate python, D3, and more into your analysis

**Reproducible Finance with R** Jan 24 2022 Reproducible Finance with R: Code Flows and Shiny Apps for Portfolio Analysis is a unique introduction to data science for investment management that explores the three major R/finance coding paradigms, emphasizes data visualization, and explains how to build a cohesive suite of functioning Shiny applications. The full source code, asset price data and live Shiny applications are available at reproduciblefinance.com. The ideal reader works in finance or wants to work in finance and has a desire to learn R code and Shiny through simple, yet practical real-world examples. The book begins with the first step in data science: importing and wrangling data, which in the investment context means importing asset prices, converting to returns, and constructing a portfolio. The next section covers risk and tackles descriptive statistics such as standard deviation, skewness, kurtosis, and their rolling histories. The third section focuses on portfolio theory, analyzing the Sharpe Ratio, CAPM, and Fama French models. The book concludes with applications for finding individual asset contribution to risk and for running Monte Carlo simulations. For each of these tasks, the three major coding paradigms are explored and the work is wrapped into interactive Shiny dashboards.

**Outstanding User Interfaces with Shiny** May 28 2022 Outstanding User Interfaces with Shiny provides the reader with necessary knowledge to develop beautiful and highly interactive user interfaces. It gives the minimum requirements in HTML/JavaScript and CSS to be able to extend already existing Shiny layouts or develop new templates from scratch. Suitable for anyone with some experience of Shiny, package development and software engineering best practices, this book is an ideal guide for graduates and professionals who wish to bring their app design to the next level. Key Features: Provides a survival kit in web development to seamlessly get started with HTML/CSS/JavaScript Leverage CSS and Sass and higher-level tools like {bslib} to substantially enhance the design of your app in no time A comprehensive guide to the {htmltools} package to seamlessly customize existing layouts Describes in detail how Shiny inputs work and how R and JavaScript communicate Details all the necessary steps to create a production-grade custom template from scratch: packaging, shiny tags creation, validating and testing R components and JavaScript Expose common web development debugging technics

**Provides a list of existing templates, resources to get started and to explore**

**Management 3.0 Jul 06 2020** In many organizations, management is the biggest obstacle to successful Agile development. Unfortunately, reliable guidance on Agile management has been scarce indeed. Now, leading Agile manager Jurgen Appelo fills that gap, introducing a realistic approach to leading, managing, and growing your Agile team or organization. Writing for current managers and developers moving into management, Appelo shares insights that are grounded in modern complex systems theory, reflecting the intense complexity of modern software development. Appelo's Management 3.0 model recognizes that today's organizations are living, networked systems; and that management is primarily about people and relationships. Management 3.0 doesn't offer mere checklists or prescriptions to follow slavishly; rather, it deepens your understanding of how organizations and Agile teams work and gives you tools to solve your own problems. Drawing on his extensive experience as an Agile manager, the author identifies the most important practices of Agile management and helps you improve each of them. Coverage includes • Getting beyond "Management 1.0" control and "Management 2.0" fads • Understanding how complexity affects your organization • Keeping your people active, creative, innovative, and motivated • Giving teams the care and authority they need to grow on their own • Defining boundaries so teams can succeed in alignment with business goals • Sowing the seeds for a culture of software craftsmanship • Crafting an organizational network that promotes success • Implementing continuous improvement that actually works Thoroughly pragmatic—and never trendy—Jurgen Appelo's Management 3.0 helps you bring greater agility to any software organization, team, or project.

**Emerging Technologies for Education Sep 07 2020** This book constitutes the refereed conference proceedings of the 6th International Symposium on Emerging Technologies for Education, SETE 2021, held in Zhuhai, China in November 2021. 35 full papers were accepted together with 8 short papers out of 58 submissions. The papers focus on the following subjects: Emerging Technologies for Education, Digital Technology, Creativity, and Education; Education Technology (Edtech) and ICT for Education; Education + AI; Adaptive Learning, Emotion and Behaviour Recognition and Understanding in Education; as well as papers from the International Symposium on User Modeling and Language Learning (UMLL2021) and the International Workshop on Educational Technology for Language Learning (ETLL 2021).

**Refactoring at Scale Sep 27 2019** Making significant changes to large, complex codebases is a daunting task—one that's nearly impossible to do successfully unless you have the right team, tools, and mindset. If your application is in need of a substantial overhaul and you're unsure how to go about implementing those changes in a sustainable way, then this book is for you. Software engineer Maude Lemaire walks you through the entire refactoring process from start to finish. You'll learn from her experience driving performance and refactoring efforts at Slack during a period of critical growth, including two case studies illustrating the impact these techniques can have in the real world. This book will help you achieve a newfound ability to productively introduce important changes in your codebase. Understand how code degrades and why some degradation is inevitable Quantify and qualify the state of your codebase before refactoring Draft a well-scoped execution plan with strategic milestones Win support from engineering leadership Build and coordinate a team best suited for the project Communicate effectively inside and outside your team Adopt best practices for successfully executing the refactor

**Epidemics Feb 10 2021** This book is designed to be a practical study in infectious disease dynamics. The book offers an easy to follow implementation and analysis of mathematical epidemiology. The book focuses on recent case studies in order to explore various conceptual, mathematical, and statistical issues. The dynamics of infectious diseases shows a wide diversity of pattern. Some have locally persistent chains-of-transmission, others persist spatially in 'consumer-resource metapopulations'. Some infections are prevalent among the

young, some among the old and some are age-invariant. Temporally, some diseases have little variation in prevalence, some have predictable seasonal shifts and others exhibit violent epidemics that may be regular or irregular in their timing. Models and 'models-with-data' have proved invaluable for understanding and predicting this diversity, and thence help improve intervention and control. Using mathematical models to understand infectious disease dynamics has a very rich history in epidemiology. The field has seen broad expansions of theories as well as a surge in real-life application of mathematics to dynamics and control of infectious disease. The chapters of *Epidemics: Models and Data using R* have been organized in a reasonably logical way: Chapters 1-10 is a mix and match of models, data and statistics pertaining to local disease dynamics; Chapters 11-13 pertains to spatial and spatiotemporal dynamics; Chapter 14 highlights similarities between the dynamics of infectious disease and parasitoid-host dynamics; Finally, Chapters 15 and 16 overview additional statistical methodology useful in studies of infectious disease dynamics. This book can be used as a guide for working with data, models and 'models-and-data' to understand epidemics and infectious disease dynamics in space and time.

Engineering Production-Grade Shiny Apps Nov 29 2019 From the Reviews "[This book] contains an excellent blend of both Shiny-specific topics ... and practical advice from software development that fits in nicely with Shiny apps. You will find many nuggets of wisdom sprinkled throughout these chapters...." Eric Nantz, Host of the R-Podcast and the Shiny Developer Series (from the Foreword) "[This] book is a gradual and pleasant invitation to the production-ready shiny apps world. It ...exposes a comprehensive and robust workflow powered by the {golem} package. [It] fills the not yet covered gap between shiny app development and deployment in such a thrilling way that it may be read in one sitting.... In the industry world, where processes robustness is a key toward productivity, this book will indubitably have a tremendous impact." David Granjon, Sr. Expert Data Science, Novartis Presented in full color, *Engineering Production-Grade Shiny Apps* helps people build production-grade shiny applications, by providing advice, tools, and a methodology to work on web applications with R. This book starts with an overview of the challenges which arise from any big web application project: organizing work, thinking about the user interface, the challenges of teamwork and the production environment. Then, it moves to a step-by-step methodology that goes from the idea to the end application. Each part of this process will cover in detail a series of tools and methods to use while building production-ready shiny applications. Finally, the book will end with a series of approaches and advice about optimizations for production. Features Focused on practical matters: This book does not cover Shiny concepts, but practical tools and methodologies to use for production. Based on experience: This book is a formalization of several years of experience building Shiny applications. Original content: This book presents new methodologies and tooling, not just a review of what already exists. *Engineering Production-Grade Shiny Apps* covers medium to advanced content about Shiny, so it will help people that are already familiar with building apps with Shiny, and who want to go one step further.

Building a Second Brain Nov 09 2020 A revolutionary approach to enhancing productivity, creating flow, and vastly increasing your ability to capture, remember, and benefit from the unprecedented amount of information all around us. For the first time in history, we have instantaneous access to the world's knowledge. There has never been a better time to learn, to contribute, and to improve ourselves. Yet, rather than feeling empowered, we are often left feeling overwhelmed by this constant influx of information. The very knowledge that was supposed to set us free has instead led to the paralyzing stress of believing we'll never know or remember enough. Now, this eye-opening and accessible guide shows how you can easily create your own personal system for knowledge management, otherwise known as a Second Brain. As a trusted and organized digital repository of your most valued ideas, notes, and creative work synced across all your devices and platforms, a Second Brain gives you the

confidence to tackle your most important projects and ambitious goals. Discover the full potential of your ideas and translate what you know into more powerful, more meaningful improvements in your work and life by **Building a Second Brain**.

**Domain-driven Design** Oct 28 2019 Describes ways to incorporate domain modeling into software development.

**Programming in Scala** Jan 30 2020 Presents an introduction to the new programming language for the Java Platform.

**Deep Learning for Coders with fastai and PyTorch** Dec 11 2020 Deep learning is often viewed as the exclusive domain of math PhDs and big tech companies. But as this hands-on guide demonstrates, programmers comfortable with Python can achieve impressive results in deep learning with little math background, small amounts of data, and minimal code. How? With fastai, the first library to provide a consistent interface to the most frequently used deep learning applications. Authors Jeremy Howard and Sylvain Gugger, the creators of fastai, show you how to train a model on a wide range of tasks using fastai and PyTorch. You'll also dive progressively further into deep learning theory to gain a complete understanding of the algorithms behind the scenes. Train models in computer vision, natural language processing, tabular data, and collaborative filtering Learn the latest deep learning techniques that matter most in practice Improve accuracy, speed, and reliability by understanding how deep learning models work Discover how to turn your models into web applications Implement deep learning algorithms from scratch Consider the ethical implications of your work Gain insight from the foreword by PyTorch cofounder, Soumith Chintala

**Learn Emotion Analysis with R** Mar 14 2021 Learn to assess textual data and extract sentiments using various text analysis R packages **KEY FEATURES** ? In-depth coverage on core principles, challenges, and application of Emotion Analysis. ? Includes real-world examples to simplify practical uses of R, Shiny, and various popular NLP techniques. ? Covers different strategies used in Sentiment and Emotion Analysis. **DESCRIPTION** This book covers how to conduct Emotion Analysis based on Lexicons. Through a detailed code walkthrough, the book will explain how to develop systems for Sentiment and Emotion Analysis from popular sources of data, including WhatsApp, Twitter, etc. The book starts with a discussion on R programming and Shiny programming as these will lay the foundation for the system to be developed for Emotion Analysis. Then, the book discusses essentials of Sentiment Analysis and Emotion Analysis. The book then proceeds to build Shiny applications for Emotion Analysis. The book rounds off with creating a tool for Emotion Analysis from the data obtained from Twitter and WhatsApp. Emotion Analysis can be also performed using Machine Learning. However, this requires labeled data. This is a logical next step after reading this book. **WHAT YOU WILL LEARN** ? Learn the essentials of Sentiment Analysis. ? Learn the essentials of Emotion Analysis. ? Conducting Emotion Analysis using Lexicons. ? Learn to develop Shiny applications. ? Understanding the essentials of R programming for developing systems for Emotion Analysis. **WHO THIS BOOK IS FOR** This book aspires to teach NLP users, ML engineers, and AI engineers who want to develop a strong understanding of Emotion and Sentiment Analysis. No prior knowledge of R programming is needed. All you need is just an open mind to learn and explore this concept. **TABLE OF CONTENTS** Section 1 Introduction to R Programming 1 Getting Started with R 2 Simple Operations using R 3 Developing Simple Applications in R Section 2 Introduction to Shiny Programming 4 Structure of Shiny Applications 5 Shiny Application 1 6 Shiny Application 2 Section 3 Emotion Analysis 7 Sentiment Analysis 8 Emotion Analysis 9 ZEUSg Section 4 Twitter Data Analysis 10 Introduction to Twitter Data Analysis 11 Emotion Analysis on Twitter Data 12 Chidiya **BONUS CHAPTER** WhatsApp Chat Analysis

**Mastering Shiny** Nov 02 2022 Master the Shiny web framework—and take your R skills to a whole new level. By letting you move beyond static reports, Shiny helps you create fully interactive

web apps for data analyses. Users will be able to jump between datasets, explore different subsets or facets of the data, run models with parameter values of their choosing, customize visualizations, and much more. Hadley Wickham from RStudio shows data scientists, data analysts, statisticians, and scientific researchers with no knowledge of HTML, CSS, or JavaScript how to create rich web apps from R. This in-depth guide provides a learning path that you can follow with confidence, as you go from a Shiny beginner to an expert developer who can write large, complex apps that are maintainable and performant. Get started: Discover how the major pieces of a Shiny app fit together Put Shiny in action: Explore Shiny functionality with a focus on code samples, example apps, and useful techniques Master reactivity: Go deep into the theory and practice of reactive programming and examine reactive graph components Apply best practices: Examine useful techniques for making your Shiny apps work well in production

**Web Application Development with R Using Shiny** Mar 26 2022 This book follows a standard tutorial-based approach which will teach you how to make a web app using R and Shiny quickly and easily. This book is for anybody who wants to produce interactive data summaries over the Web, whether you want to share them with a few colleagues or the whole world. You need no previous experience with R, Shiny, HTML, or CSS to begin using this book, although you will need at least a little previous experience with programming in a different language.

**R Packages** Aug 19 2021 Turn your R code into packages that others can easily download and use. This practical book shows you how to bundle reusable R functions, sample data, and documentation together by applying author Hadley Wickham's package development philosophy. In the process, you'll work with devtools, roxygen, and testthat, a set of R packages that automate common development tasks. Devtools encapsulates best practices that Hadley has learned from years of working with this programming language. Ideal for developers, data scientists, and programmers with various backgrounds, this book starts you with the basics and shows you how to improve your package writing over time. You'll learn to focus on what you want your package to do, rather than think about package structure. Learn about the most useful components of an R package, including vignettes and unit tests Automate anything you can, taking advantage of the years of development experience embodied in devtools Get tips on good style, such as organizing functions into files Streamline your development process with devtools Learn the best way to submit your package to the Comprehensive R Archive Network (CRAN) Learn from a well-respected member of the R community who created 30 R packages, including ggplot2, dplyr, and tidyr

**Learning Shiny** May 16 2021 Make the most of R's dynamic capabilities and implement web applications with Shiny About This Book Present interactive data visualizations in R within the Shiny framework Construct web dashboards in a simple, intuitive, but fully flexible environment Apply your skills to create a real-world web application with this step-by-step guide Who This Book Is For If you are a data scientist who needs a platform to show your results to a broader audience in an attractive and visual way, or a web developer with no prior experience in R or Shiny, this is the book for you. What You Will Learn Comprehend many useful functions, such as lapply and apply, to process data in R Write and structure different files to create a basic dashboard Develop graphics in R using popular graphical libraries such as ggplot2 and GoogleVis Mount a dashboard on a Linux Server Integrate Shiny with non-R-native visualization, such as D3.js Design and build a web application In Detail R is nowadays one of the most used tools in data science. However, along with Shiny, it is also gaining territory in the web application world, due to its simplicity and flexibility. Shiny is a framework that enables the creation of interactive visualizations written entirely in R and can be displayed in almost any ordinary web browser. It is a package from RStudio, which is an IDE for R. From the fundamentals of R to the administration of multi-concurrent, fully customized web applications, this book explains how to achieve your desired web application in an easy and gradual way.

You will start by learning about the fundamentals of R, and will move on to looking at simple and practical examples. These examples will enable you to grasp many useful tools that will assist you in solving the usual problems that can be faced when developing data visualizations. You will then walk through the integration of Shiny with R in general and view the different visualization possibilities out there. Finally, you will put your skills to the test and create your first web application! Style and approach This is a comprehensive, step-by-step guide that will allow you to learn and make full use of R and Shiny's capabilities in a gradual way, together with clear, applied examples.

**An Introduction to Statistical Learning** Jan 12 2021 An Introduction to Statistical Learning provides an accessible overview of the field of statistical learning, an essential toolset for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. This book presents some of the most important modeling and prediction techniques, along with relevant applications. Topics include linear regression, classification, resampling methods, shrinkage approaches, tree-based methods, support vector machines, clustering, and more. Color graphics and real-world examples are used to illustrate the methods presented. Since the goal of this textbook is to facilitate the use of these statistical learning techniques by practitioners in science, industry, and other fields, each chapter contains a tutorial on implementing the analyses and methods presented in R, an extremely popular open source statistical software platform. Two of the authors co-wrote The Elements of Statistical Learning (Hastie, Tibshirani and Friedman, 2nd edition 2009), a popular reference book for statistics and machine learning researchers. An Introduction to Statistical Learning covers many of the same topics, but at a level accessible to a much broader audience. This book is targeted at statisticians and non-statisticians alike who wish to use cutting-edge statistical learning techniques to analyze their data. The text assumes only a previous course in linear regression and no knowledge of matrix algebra.

**Applied Biclustering Methods for Big and High-Dimensional Data Using R** Mar 02 2020 Proven Methods for Big Data Analysis As big data has become standard in many application areas, challenges have arisen related to methodology and software development, including how to discover meaningful patterns in the vast amounts of data. Addressing these problems, Applied Biclustering Methods for Big and High-Dimensional Data Using R shows how to apply biclustering methods to find local patterns in a big data matrix. The book presents an overview of data analysis using biclustering methods from a practical point of view. Real case studies in drug discovery, genetics, marketing research, biology, toxicity, and sports illustrate the use of several biclustering methods. References to technical details of the methods are provided for readers who wish to investigate the full theoretical background. All the methods are accompanied with R examples that show how to conduct the analyses. The examples, software, and other materials are available on a supplementary website.

**Using Shiny to Teach Econometric Models** Jul 18 2021 This Element discusses how shiny, an R package, can help instructors teach quantitative methods more effectively by way of interactive web apps. The interactivity increases instructors' effectiveness by making students more active participants in the learning process, allowing them to engage with otherwise complex material in an accessible, dynamic way. The Element offers four detailed apps that cover two fundamental linear regression topics: estimation methods (least squares, maximum likelihood) and the classic linear regression assumptions. It includes a summary of what the apps can be used to demonstrate, detailed descriptions of the apps' full capabilities, vignettes from actual class use, and example activities. Two other apps pertain to a more advanced topic (LASSO), with similar supporting material. For instructors interested in modifying the apps, the Element also documents the main apps' general code structure, highlights some of the more likely modifications, and goes through what functions need to be amended.

**Web Application Development with R Using Shiny - Second Edition Apr 14 2021** Integrate the power of R with the simplicity of Shiny to deliver cutting-edge analytics over the Web About This Book- Use Shiny's built-in functions to produce engaging user interfaces, and integrate them into your own web pages- Implement powerful user-contributed packages to access graphics from the web, make your own dashboards, use interactive maps, and more- Extend Shiny using JavaScript and jQuery with minimal coding using this handy, step-by-step guide Who This Book Is For This book is for anybody who wants to produce interactive data summaries over the web, whether you want to share them with a few colleagues or the whole world. No previous experience with R, Shiny, HTML, or CSS is required to begin using this book, although you should possess some previous experience with programming in a different language. What You Will Learn- Build interactive applications using Shiny's built-in widgets- Use the built-in layout functions in Shiny to produce user-friendly applications- Integrate Shiny applications with web pages and customize them using HTML and CSS- Harness the power of JavaScript and jQuery to customize your applications- Engage your users and build better analytics using interactive plots- Debug your applications using Shiny's built-in functions- Deliver simple and powerful analytics across your organization using Shiny dashboards- Share your applications with colleagues or over the Internet using cloud services or your own server In Detail R is a highly flexible and powerful tool for analyzing and visualizing data. Most of the applications built using various libraries with R are desktop-based. But what if you want to go on the web? Here comes Shiny to your rescue! Shiny allows you to create interactive web applications using the excellent analytical and graphical capabilities of R. This book will guide you through basic data management and analysis with R through your first Shiny application, and then show you how to integrate Shiny applications with your own web pages. Finally, you will learn how to finely control the inputs and outputs of your application, along with using other packages to build state-of-the-art applications, including dashboards. Style and approach Learn by doing! Each chapter includes code and examples to use and adapt for your own applications. As the chapters progress, the code and examples are built upon until you have all the materials required to build a large, complex, real-world analytics application.

**Learn ggplot2 Using Shiny App Jun 16 2021** This book and app is for practitioners, professionals, researchers, and students who want to learn how to make a plot within the R environment using ggplot2, step-by-step without coding. In widespread use in the statistical communities, R is a free software language and environment for statistical programming and graphics. Many users find R to have a steep learning curve but to be extremely useful once overcome. ggplot2 is an extremely popular package tailored for producing graphics within R but which requires coding and has a steep learning curve itself, and Shiny is an open source R package that provides a web framework for building web applications using R without requiring HTML, CSS, or JavaScript. This manual—"integrating" R, ggplot2, and Shiny—introduces a new Shiny app, Learn ggplot2, that allows users to make plots easily without coding. With the Learn ggplot2 Shiny app, users can make plots using ggplot2 without having to code each step, reducing typos and error messages and allowing users to become familiar with ggplot2 code. The app makes it easy to apply themes, make multiplots (combining several plots into one plot), and download plots as PNG, PDF, or PowerPoint files with editable vector graphics. Users can also make plots on any computer or smart phone. Learn ggplot2 Using Shiny App allows users to Make publication-ready plots in minutes without coding Download plots with desired width, height, and resolution Plot and download plots in png, pdf, and PowerPoint formats, with or without R code and with editable vector graphics

**Advanced R Dec 23 2021** An Essential Reference for Intermediate and Advanced R Programmers Advanced R presents useful tools and techniques for attacking many types of R programming problems, helping you avoid mistakes and dead ends. With more than ten years of experience programming in R, the author illustrates the elegance, beauty, and flexibility at the

heart of R. The book develops the necessary skills to produce quality code that can be used in a variety of circumstances. You will learn: The fundamentals of R, including standard data types and functions Functional programming as a useful framework for solving wide classes of problems The positives and negatives of metaprogramming How to write fast, memory-efficient code This book not only helps current R users become R programmers but also shows existing programmers what's special about R. Intermediate R programmers can dive deeper into R and learn new strategies for solving diverse problems while programmers from other languages can learn the details of R and understand why R works the way it does.

Web Analytics Demystified Aug 07 2020

*Creating More Effective Graphs* Dec 31 2019 A succinct and highly readable guide to creating effective graphs The right graph can be a powerful tool for communicating information, improving a presentation, or conveying your point in print. If your professional endeavors call for you to present data graphically, here's a book that can help you do it more effectively. *Creating More Effective Graphs* gives you the basic knowledge and techniques required to choose and create appropriate graphs for a broad range of applications. Using real-world examples everyone can relate to, the author draws on her years of experience in graphical data analysis and presentation to highlight some of today's most effective methods. In clear, concise language, the author answers such common questions as: What constitutes an effective graph for communicating data? How do I choose the type of graph that is best for my data? How do I recognize a misleading graph? Why do some graphs have logarithmic scales? In no time you'll graduate from bar graphs and pie charts to graphs that illuminate data like: Dot plots Box plots Scatterplots Linked micromaps Trellis displays Mosaic plots Month plots Scatterplot matrices . . . most of them requiring only inexpensive, easily downloadable software. Whether you're a novice at graphing or already use graphs in your work but want to improve them, *Creating More Effective Graphs* will help you develop the kind of clear, accurate, and well-designed graphs that will allow your data to be understood.

*Data-Driven Security* Jun 04 2020 Uncover hidden patterns of data and respond with countermeasures Security professionals need all the tools at their disposal to increase their visibility in order to prevent security breaches and attacks. This careful guide explores two of the most powerful data analysis and visualization. You'll soon understand how to harness and wield data, from collection and storage to management and analysis as well as visualization and presentation. Using a hands-on approach with real-world examples, this book shows you how to gather feedback, measure the effectiveness of your security methods, and make better decisions. Everything in this book will have practical application for information security professionals. Helps IT and security professionals understand and use data, so they can thwart attacks and understand and visualize vulnerabilities in their networks Includes more than a dozen real-world examples and hands-on exercises that demonstrate how to analyze security data and intelligence and translate that information into visualizations that make plain how to prevent attacks Covers topics such as how to acquire and prepare security data, use simple statistical methods to detect malware, predict rogue behavior, correlate security events, and more Written by a team of well-known experts in the field of security and data analysis Lock down your networks, prevent hacks, and thwart malware by improving visibility into the environment, all through the power of data and Security Using Data Analysis, Visualization, and Dashboards.

Web Application Development with R Using Shiny Nov 21 2021 Analyze, communicate, and design your own sophisticated and interactive web applications using the R (v 3.4) Shiny (1.1.0) package Key Features Explore the power of R Shiny to make interactive web applications easily Create engaging user interfaces using elements such as HTML5 shiny tags and Ttabsets Build and deploy your interactive Shiny web application using shinyapps.io Book Description Web Application Development with R Using Shiny helps you become familiar with the complete R

Shiny package. The book starts with a quick overview of R and its fundamentals, followed by an exploration of the fundamentals of Shiny and some of the things that it can help you do. You'll learn about the wide range of widgets and functions within Shiny and how they fit together to make an attractive and easy to use application. Once you have understood the basics, you'll move on to studying more advanced UI features, including how to style apps in detail using the Bootstrap framework or and Shiny's inbuilt layout functions. You'll learn about enhancing Shiny with JavaScript, ranging from adding simple interactivity with JavaScript right through to using JavaScript to enhance the reactivity between your app and the UI. You'll learn more advanced Shiny features of Shiny, such as uploading and downloading data and reports, as well as how to interact with tables and link reactive outputs. Lastly, you'll learn how to deploy Shiny applications over the internet, as well as and how to handle storage and data persistence within Shiny applications, including the use of relational databases. By the end of this book, you'll be ready to create responsive, interactive web applications using the complete R (v 3.4) Shiny (1.1.0) suite. What you will learn Harness the power of JavaScript to customize your applications Build dashboards with predefined UI and layouts Engage your users and build better analytics using interactive plots Learn advanced code patterns to make your applications easy to write and maintain. Develop a full understanding of Shiny's UI functions to give you the power to build a wide variety of attractive applications. Store data and interact with databases with Shiny. Learn how to share your Shiny applications Understand reactivity at the conceptual level to build more efficient and robust apps Who this book is for Web Application Development with R Using Shiny is for you if you are interested in creating compelling web applications and interactive data visualization over the web using Shiny. Programming experience with R is required.

**Getting Started with Arduino Jun 24 2019** Presents an introduction to the open-source electronics prototyping platform.

**OpenIntro Statistics Aug 26 2019** The OpenIntro project was founded in 2009 to improve the quality and availability of education by producing exceptional books and teaching tools that are free to use and easy to modify. We feature real data whenever possible, and files for the entire textbook are freely available at [openintro.org](http://openintro.org). Visit our website, [openintro.org](http://openintro.org). We provide free videos, statistical software labs, lecture slides, course management tools, and many other helpful resources.

**Hands-On Dashboard Development with Shiny Oct 21 2021** Progressively explore UI development with Shiny via practical examples Key Features Write a Shiny interface in pure HTML Explore powerful layout functions to make attractive dashboards and other intuitive interfaces Get to grips with Bootstrap and leverage it in your Shiny applications Book Description Although vanilla Shiny applications look attractive with some layout flexibility, you may still want to have more control over how the interface is laid out to produce a dashboard. Hands-On Dashboard Development with Shiny helps you incorporate this in your applications. The book starts by guiding you in producing an application based on the diamonds dataset included in the ggplot2 package. You'll create a single application, but the interface will be reskinned and rebuilt throughout using different methods to illustrate their uses and functions using HTML, CSS, and JavaScript. You will also learn to develop an application that creates documents and reports using R Markdown. Furthermore, the book demonstrates the use of HTML templates and the Bootstrap framework. Moving along, you will learn how to produce dashboards using the Shiny command and dashboard package. Finally, you will learn how to lay out applications using a wide range of built-in functions. By the end of the book, you will have an understanding of the principles that underpin layout in Shiny applications, including sections of HTML added to a vanilla Shiny application, HTML interfaces written from scratch, dashboards, navigation bars, and interfaces. What you will learn Add HTML to a Shiny application and write its interfaces from scratch in HTML Use built-in Shiny functions to

produce attractive and flexible layouts Produce dashboards, adding icons and notifications Explore Bootstrap themes to lay out your applications Get insights into UI development with hands-on examples Use R Markdown to create and download reports Who this book is for If you have some experience writing Shiny applications and want to use HTML, CSS, and Bootstrap to make custom interfaces, then this book is for you.

**Geospatial Health Data** Feb 22 2022 Geospatial health data are essential to inform public health and policy. These data can be used to quantify disease burden, understand geographic and temporal patterns, identify risk factors, and measure inequalities. **Geospatial Health Data: Modeling and Visualization with R-INLA and Shiny** describes spatial and spatio-temporal statistical methods and visualization techniques to analyze georeferenced health data in R. The book covers the following topics: Manipulate and transform point, areal, and raster data, Bayesian hierarchical models for disease mapping using areal and geostatistical data, Fit and interpret spatial and spatio-temporal models with the Integrated Nested Laplace Approximations (INLA) and the Stochastic Partial Differential Equation (SPDE) approaches, Create interactive and static visualizations such as disease maps and time plots, Reproducible R Markdown reports, interactive dashboards, and Shiny web applications that facilitate the communication of insights to collaborators and policy makers. The book features fully reproducible examples of several disease and environmental applications using real-world data such as malaria in The Gambia, cancer in Scotland and USA, and air pollution in Spain. Examples in the book focus on health applications, but the approaches covered are also applicable to other fields that use georeferenced data including epidemiology, ecology, demography or criminology. The book provides clear descriptions of the R code for data importing, manipulation, modeling and visualization, as well as the interpretation of the results. This ensures contents are fully reproducible and accessible for students, researchers and practitioners.

**Interactive Web-Based Data Visualization with R, plotly, and shiny** Sep 19 2021 The richly illustrated **Interactive Web-Based Data Visualization with R, plotly, and shiny** focuses on the process of programming interactive web graphics for multidimensional data analysis. It is written for the data analyst who wants to leverage the capabilities of interactive web graphics without having to learn web programming. Through many R code examples, you will learn how to tap the extensive functionality of these tools to enhance the presentation and exploration of data. By mastering these concepts and tools, you will impress your colleagues with your ability to quickly generate more informative, engaging, and reproducible interactive graphics using free and open source software that you can share over email, export to pdf, and more. **Key Features:** Convert static ggplot2 graphics to an interactive web-based form Link, animate, and arrange multiple plots in standalone HTML from R Embed, modify, and respond to plotly graphics in a shiny app Learn best practices for visualizing continuous, discrete, and multivariate data Learn numerous ways to visualize geo-spatial data This book makes heavy use of plotly for graphical rendering, but you will also learn about other R packages that support different phases of a data science workflow, such as tidyr, dplyr, and tidyverse. Along the way, you will gain insight into best practices for visualization of high-dimensional data, statistical graphics, and graphical perception. The printed book is complemented by an interactive website where readers can view movies demonstrating the examples and interact with graphics.

**R Markdown** Aug 31 2022 **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 Golemund 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.

**Mastering Shiny Oct 01 2022** Master the Shiny web framework--and take your R skills to a whole new level. Shiny helps you create fully interactive web apps for data analyses by letting you move beyond static reports, tables, and graphs. Your users will be able to jump between datasets, explore different subsets, run models with parameter values of their choosing, customize visualizations, and much more. Hadley Wickham from RStudio shows data scientists, data analysts, statisticians, and scientific researchers with no knowledge of HTML, CSS, or JavaScript how to create complex Shiny apps. Shiny is easy to learn, but even intermediate users often wonder what they've missed. This in-depth introduction provides a learning path that you can follow with confidence. Getting started: Begin with a tutorial-style exploration of the basics Shiny in action: Explore Shiny functionality with a focus on code samples and example apps Best practices: Learn techniques for managing complexity and ensuring correctness, and explore ways to measure and improve your Shiny app's scalability Mastering reactivity: Learn the underlying theory of reactivity to improve your ability to reason about complex Shiny apps.

**JavaScript for R Jul 30 2022** Little known to many, R works just as well with JavaScript—this book delves into the various ways both languages can work together. The ultimate aim of this work is to put the reader at ease with inviting JavaScript in their data science workflow. In that respect the book is not teaching one JavaScript but rather we show how little JavaScript can greatly support and enhance R code. Therefore, the focus is on integrating external JavaScript libraries and no prior knowledge of JavaScript is required. Key Features: ? Easy to pick up. ? An entry way to learning JavaScript for R. ? Covers topics not covered anywhere else. ? Easy to follow along.