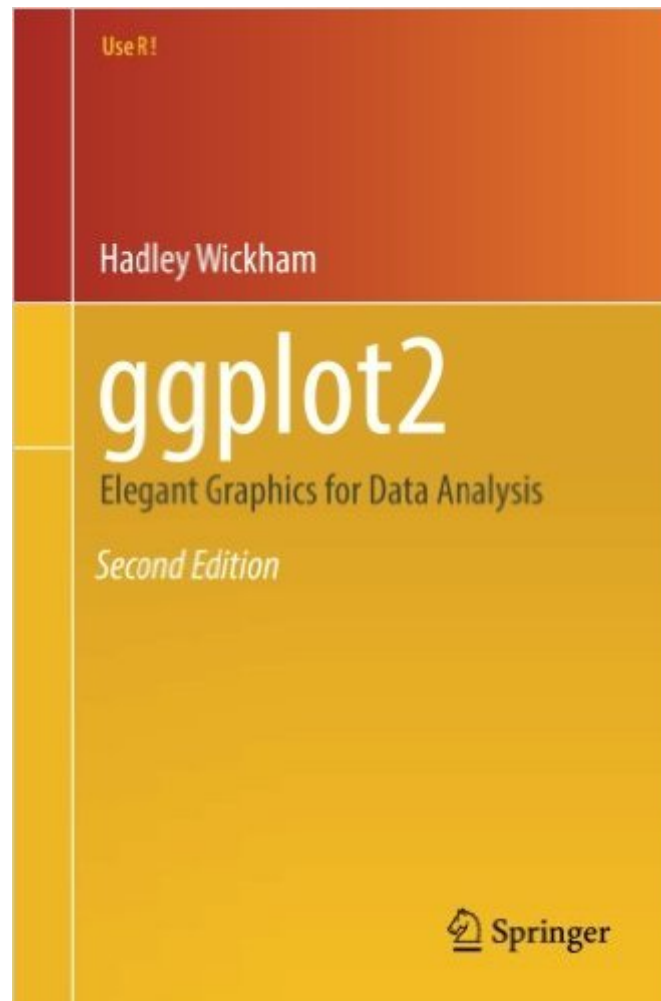# Ggplot2: Elegant Graphics For Data Analysis (Use R!)

Synopsis

This new edition to the classic book by ggplot2 creator Hadley Wickham highlights compatibility with knitr and RStudio. ggplot2 is a data visualization package for R that helps users create data graphics, including those that are multi-layered, with ease. With ggplot2, it's easy to:produce handsome, publication-quality plots with automatic legends created from the plot specificationsuperimpose multiple layers (points, lines, maps, tiles, box plots) from different data sources with automatically adjusted common scalesadd customizable smoothers that use powerful modeling capabilities of R, such as loess, linear models, generalized additive models, and robust regressionsave any ggplot2 plot (or part thereof) for later modification or reusecreate custom themes that capture in-house or journal style requirements and that can easily be applied to multiple plotsapproach a graph from a visual perspective, thinking about how each component of the data is represented on the final plotThis book will be useful to everyone who has struggled with displaying data in an informative and attractive way. Some basic knowledge of R is necessary (e.g., importing data into R).Â ggplot2 is a mini-language specifically tailored for producing graphics, and you'll learn everything you need in the book. After reading this book you'll be able to produce graphics customized precisely for your problems, and you'll find it easy to get graphics out of your head and on to the screen or page.

Book Information

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Customer Reviews

ggplot2 is an R package for creating graphs. If you have used R, you may have observed that you can control almost all aspects of a graph you create. This flexibility can come at a price in having to be familiar with several options and syntax that is not always intuitive. ggplot2 overcomes this hurdle because it is based on a grammar. After one invests the time to learn this grammar, one can create customizable plots with default settings that are aesthetically pleasing. ggplot2 automatically takes care of details such as legends. This book covers ggplot2 plotting in a clear manner. It is filled with examples, simple and complex, and all code is available from the author's website. It covers the logic of the grammar, basic plots, combining plots, how to represent subsets, and even how to format data so that it can be plotted. I highly recommend this book. You will produce plots exactly as you want them (with ease), and learn about different ways to display your data. Be sure to invest some time up front to develop an understanding rather than cutting and pasting code. This investment will pay off.

ggplot2 is a great plotting packaged for R, and this is a good reference for the system, written by the author of the package. It does a good job of explaining the grammar of graphics on which the plotting system is based, and how that is implemented in the R package. While it can takes some time to adapted to a syntax that is very different from the base plotting syntax, the overall flexibility of the system is worth the effort, and the plots it produces are quite beautiful.Fortunately for users of ggplot2, but unfortunately for my review of this book, the ggplot2 package is still rapidly evolving. Much has already changed since the publication of this book, so there are many parts of the ggplot2 system that are not covered by this book. I do not think there are many places that the code in the book will not work anymore, but there are some significant recent additions that are completely unmentioned. Since most of the important information is available online, it is hard to recommend the book too strongly, as the cost is not insignificant. On the other hand, I am happy to have supported the further development of the ggplot2 package (and other R projects) by whatever portion of the proceeds made it back to Hadley Wickham.

This book is a practical overview of ggplot2, a new graphics package available for R - and I would argue the best statistical graphics package for any language. Why? Because it allows users to create gorgeous, elegant graphics with a minimum of effort.As Wickham details in this lucid book, ggplot2 is based on a grammar of graphics, which conceives of statistical plots not as fixed chart typologies (bar, line, pie) to be filled with data, but as graphical compositions built up from component parts (scales, coordinate systems, geometric objects).Before embarking on several

chapters describing how to control various elements of the grammar, Wickham dives in (with Chapter 2, "Getting started with qplot") and guides users on how to rapidly create graphics with the qplot (for "quick plot").Two elements struck me in reading this book and beginning to use ggplot2:(i) It possesses excellent defaults. Wickham has put an enormous amount of thought into the default aesthetics. From light gray plotting backgrounds to monochromatically spaced color palettes, ggplot2 builds on decades of work done in the information visualization space.(ii) It possesses an intuitive syntax. Creating graphics in R often requires specifying an enormous number of parameters. ggplot2's syntax - the ability to "build up" a graph from layer by layer - allows for an intuitive way to control complexity.If you are serious about statistical graphics -- and even if you are new to R -- this book is an essential volume.

Inspired by Wilkinson (2005), Wickham has developed and implemented ggplot2, a layered grammar of graphics that makes intuitive the production of meaningful (and frankly beautiful) data representations. This book walks the reader through two modes of using ggplot2. For the novice seeking quick default depiction of data, the qplot() function is introduced as an effective panacea of simple plotting problems. For the user seeking to achieve more advanced graphics than possible with qplot(), Wickham introduces his layered grammar and a host of functions that simplify application of this grammar to common graphing problems. No matter whether one employs the qplot() or more advanced graphic generation approaches, the result is a printable, save-able, and highly customizable graphic object. Wickham provides extensive customization examples, including the development of themes that can be applied across multiple individual graphics, simplifying the creation of custom yet aesthetically unified graphics. As a student of cognitive science, this reviewer is impressed by the work Wickham has done to ensure that ggplot2 and, through this book, its users are sensitive to important psychological aspects of generating graphics that link abstract data and statistical interpretation via the human visual perceptual system. The result of this attention to detail is a graphing package that not only lets you plot data easily and meaningfully, but also beautifully. This book is an exemplary resource for learning the power of ggplot2 and as such is recommended to all.

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