

“To some people R is just the 18th letter of the alphabet. To others, it’s the rating on racy movies, a measure of an attic’s insulation or what pirates in movies say.”

Ashlee Vance, NY Times “Data Analysts Captivated by R’s Power” Jan 6, 2009

R is a diverse open source application that is supported by a strong community of users, including many who create packages to assist other users or simplify tasks in processing and analyzing data. The sheer number of packages can make finding the right functionality a daunting task. However, if the right package is available, the power of R, mainly, the statistical and data visualization, will shine through.

As with many other complex applications, R is known for its steep learning curve, as such time is required to understand the intricacies of the flexible, script-based analysis. The ability of R to generate robust graphics is founded in the user-established arguments within R’s plotting function and available packages. This means that rough graphics, not of presentational quality, are easy to develop, but polished graphics take effort.

The purpose of this chapter is to provide an introduction to R and building graphics. This chapter starts with an introduction to R Studio and basic R language discussions to develop the syntax and language knowledge required for further exploration of the class data sets. After developing a familiarity with the language used in R, plotting and the variability of the plot options are explored, including the functions involved with organizing and analyzing data. Finally, the chapter concludes with establishing a connection to the class databases to further explore the statistical analysis abilities of R.

ACTIVITY LIST

Activity Type	Number and Title	Assessment Type
Out-of-Class	Activity 10: An Introduction to R and R Studio	Short quiz
In Class	Activity 11: Setting Up R	Participation
In Class	Activity 12: A Starting Point – Some Simple R	Annotated Script
In Class	Activity 13: Reading in Data Files	Annotated Script
Out-of-Class	Activity 14: R Plots	Short quiz
In Class	Activity 15: Learning Some Simple Plotting Features of R	Annotated Script
In Class	Activity 16: Your First Advanced Plot	Short Response
In Class	Activity 17: Code Sharing	Peer Assessment
In Class	Activity 18: Thinking Like A Computer – Psuedo-Coding	

