Resources Related to the `mosaic` Package

Daniel Kaplan* Macalester College St. Paul, MN

Nicholas J. Horton† Amherst College Amherst, MA

Randall Pruim‡ Calvin College Grand Rapids, MI

July 2, 2014

Contents

1 Resources included with the `mosaic` package **1**

2 Textbook-related resources **2**

3 Articles **2**

Introduction

This vignette describes related resources and materials useful for teaching statistics with a focus on modeling and computation.

1 Resources included with the `mosaic` package

The `mosaic` package includes a number of additional vignettes, including

Minimal R provides a minimal set of R commands for use in Intro Stats and discusses why it is important to keep the set of commands small

Start Teaching Statistics Using R provides an introduction to R targeted at instructors of statistics courses and also discusses strategies for teaching statistics using R

A Compendium of Commands to Teach Statistics using R describes the R commands needed for all the basic statistical procedures in an Intro Stats course;

Start Modeling with R presents a strategy for teaching statistical modeling as a way of making sense of the world by building a representation that is easy to explore and manipulate.

Resampling in R discusses how to use R for resampling and bootstrapping in lower level statistics courses.

Start R in Calculus describes how R can be used in calculus courses

*dtkaplan@gmail.com
†nhorton@amherst.edu
‡rpruim@calvin.edu

2 Textbook-related resources

***Statistical Modeling: A Fresh Approach*, 2nd edition (D T Kaplan)** is an introduction to statistics embracing a modeling approach and employing resampling methods. The `mosaic` package is used throughout. http://www.mosaic-web.org/StatisticalModeling.

***Foundations and Applications of Statistics: An Introduction Using R* (R Pruim)** is an R-infused probability and mathematical statistics text that emphasizes connections between probability and statistics. The book predates the `mosaic` package, much of the code originally in the `fastR` package has been moved into the `mosaic` package. http://www.ams.org/publications/authors/books/postpub/amstext-13.

***The Statistical Sleuth in R* (N Horton)** available at http://www.amherst.edu/~nhorton/sleuth is describes how to undertake analyses in R for the examples in the first 13 chapters of the Second Edition of the *Statistical Sleuth: A Course in Methods of Data Analysis* (2002), the excellent text by Fred Ramsey and Dan Schafer.

***Introduction to the Practice of Statistics in R* (N Horton)** available at http://www.amherst.edu/~nhorton/ips6e, describes how to undertake analyses in R that are introduced as examples in the first chapters of the Sixth Edition of *Introduction to the Practice of Statistics* (2007), the excellent text by David Moore, George McCabe and Bruce Craig.

***Statistics: Unlocking the Power of Data* (Lock, Lock, Lock, Lock, and Lock)** is a recent introductory statistics textbook that embraces a resampling approach. The `Lock5Data` package contains all of the data in the book. Additional information about the book and the approached used there can be found at http://lock5stat.com

3 Articles

- G. W. Cobb, The introductory statistics course: a Ptolemaic curriculum?, *Technology Innovations in Statistics Education*, 2007, 1(1), www.escholarship.org/uc/item/6hb3k0nz.
- D. Nolan and D. Temple Lang, Computing in the statistics curricula, *The American Statistician*, 2010, 64(2), www.stat.berkeley.edu/~statcur/Preprints/ComputingCurric3.pdf.