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

August 24, 2013

Contents

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 disucusses why it is important to keep the set of commands small

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

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.math.smith.edu/~nhorton/sleuth3 is describes how to undertake analyses in R for the examples in the first 13 chapters of the Third Edition of the *Statistical Sleuth: A Course in Methods of Data Analysis* (2013), the excellent text by Fred Ramsey and Dan Schafer.

***Introduction to the Practice of Statistics in R* (N Horton)** available at http://www.math.smith.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.