

# 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 17, 2013

## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Package Vignettes</b>	<b>1</b>
<b>3</b>	<b>Textbook Related</b>	<b>2</b>
<b>4</b>	<b>Articles</b>	<b>2</b>

## 1 Introduction

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

## 2 Package Vignettes

The `mosaic` package includes a number of vignettes including vignettes discussing

- a minimal set of R commands for use in Introductory Statistics and which it is important to keep the set of commands small;
- the R commands needed for all the basic statistical procedures in an Intro Stats course;
- strategies for teaching statistics using R;
- resampling methods in R; and
- using R in calculus

---

\*[dtkaplan@gmail.com](mailto:dtkaplan@gmail.com)

†[nhorton@amherst.edu](mailto:nhorton@amherst.edu)

‡[rpruim@calvin.edu](mailto:rpruim@calvin.edu)

### 3 Textbook Related

*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> 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 approach used there can be found at <http://lock5stat.com>

### 4 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](http://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](http://www.stat.berkeley.edu/~statcur/Preprints/ComputingCurric3.pdf).