Resources Related to the `mosaic` Package

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Contents

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 why 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.

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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 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

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.

- 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.