Workshop-related resources

Books

While there are a large number of resources available for R, the following form a core start point:

1. R for Data Science[1] is available online and can also be purchased from various sellers. It is a solid introduction to using the tidyverse set of packages and working with R in general.
2. ggplot2: Elegant Graphics for Data Analysis[2] is an excellent in-depth look at the ggplot2 package and its capabilities.
3. Linear Models with R[3] discusses linear modeling with a more practical viewpoint and using a lot of R code in the process.
4. Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models[4] discusses more advanced modeling, including topics like Logistic Regression, Random Effects and Repeated Measures.
5. An Introduction to Statistical Learning: with Applications in R[5] is a great broad introduction to various topics related to statistical learning.

Cheatsheets

- Various RStudio-provided cheatsheets[6]. Most other links are from that site.
- Data Import[7] with the readr package and its friends.
- Graphing[8] with ggplot2.
- Data Transformations[9] with dplyr. There is also an older version[10] that is slightly different.
- The stringr[11] package for string manipulations.
- The purrr[12] package for working with lists of items in a consistent way.
- R Markdown[13] and another reference[14].
- RStudio IDE[15].
- Mosaic[16]

[1] http://r4ds.had.co.nz/
[2] https://www.amazon.com/ggplot2-Elegant-Graphics-Data-Analysis/dp/331924275X/
[3] https://www.amazon.com/Linear-Models-Chapman-Statistical-Science/dp/1439887330
[4] https://www.amazon.com/Extending-Linear-Model-Generalized-Nonparametric/dp/149872096X/
[5] https://www.amazon.com/Introduction-Statistical-Learning-Applications-Statistics/dp/1461471370
[6] https://www.rstudio.com/resources/cheatsheets/
[7] https://github.com/rstudio/cheatsheets/raw/master/data-import.pdf
[8] https://github.com/rstudio/cheatsheets/raw/master/data-visualization-2.1.pdf
[9] https://github.com/rstudio/cheatsheets/raw/master/data-transformation.pdf
[10] https://www.rstudio.com/wp-content/uploads/2015/02/data-wrangling-cheatsheet.pdf
[11] https://github.com/rstudio/cheatsheets/raw/master/strings.pdf
[12] https://github.com/rstudio/cheatsheets/raw/master/purrr.pdf
[13] https://github.com/rstudio/cheatsheets/raw/master/rmarkdown-2.0.pdf
[14] https://www.rstudio.com/wp-content/uploads/2015/03/rmarkdown-reference.pdf
[15] https://github.com/rstudio/cheatsheets/raw/master/rstudio-ide.pdf
[16] https://github.com/rstudio/cheatsheets/raw/master/mosaic.pdf

Datasets

- compression.xlsx[17] Data on the effects of various compression techniques, collected by Shelby Williamson for her senior thesis project at Hanover College, under the supervision of Molly Winke.

Other links

[17] datasets/compression.xlsx