

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 Science¹ 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 Analysis² is an excellent in-depth look at the ggplot2 package and its capabilities.
3. Linear Models with R³ 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 Models⁴ discusses more advanced modeling, including topics like Logistic Regression, Random Effects and Repeated Measures.
5. An Introduction to Statistical Learning: with Applications in R⁵ is a great broad introduction to various topics related to statistical learning.

Cheatsheets

- Various RStudio-provided cheatsheets⁶. Most other links are from that site.
- Data Import⁷ with the readr package and its friends.
- Graphing⁸ with ggplot2.
- Data Transformations⁹ with dplyr. There is also an older version¹⁰ that is slightly different.
- The stringr¹¹ package for string manipulations.
- The purrr¹² package for working with lists of items in a consistent way.
- R Markdown¹³ and another reference¹⁴.
- RStudio IDE¹⁵.
- Mosaic¹⁶

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.
- `targeting.sav`¹⁸ Data from the “Tuttle Shooting Decisions Study”, provided by Kati Tuttle.

Other links

¹⁷[datasets/compression.xlsx](#)

¹⁸[datasets/targeting.sav](#)