Introduction to Data Analysis & Visualization with R workshop handout

Up and running with R

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| R website | https://www.r-project.org/ |
| CRAN, Comprehensive R Archive Network –download R and additional 3rd party packages | https://cran.r-project.org/ |
| RStudio – a 3rd party integrated development environment for R (install R before RStudio) | https://www.rstudio.com/ |
| All R packages available from CRAN, sorted by name | https://cran.r-project.org/web/packages/available\_packages\_by\_name.html |
| All R packages available from CRAN, sorted by date of publication | https://cran.r-project.org/web/packages/available\_packages\_by\_date.html |
| Browse CRAN packages by topic and tools to automatically install all packages for special areas of interest | https://cran.r-project.org/web/views/ |

Recommended packages for common needs

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| Data wrangling | * data.table * dplyr * tidyr |
| Statistics | * stats (available by default) * car * ez |
| Graphics | * dygraphs * ggplot2 * plotly |
| Reproducibility | * knitr * rmarkdown * shiny |

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Further R resources

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| Official R manuals | https://cran.r-project.org/manuals.html |
| RSEEK – 3rd party search engine for R content | http://rseek.org/ |
| RStudio cheat sheets – quick reference guides for various packages and tasks | http://www.rstudio.com/resources/cheatsheets |
| Google’s R Style Guide – good reference for making R code easier to read and share | https://google.github.io/styleguide/Rguide.xml |
| CodeSchool.com – free online course | https://www.codeschool.com/courses/try-r |
| Coursera.org – free online course | https://www.coursera.org/learn/r-programming |
| DataCamp.com – free online course | https://www.datacamp.com/courses/free-introduction-to-r |
| Harvard.edu – free online course | http://online-learning.harvard.edu/course/statistics-and-r-life-sciences |
| Lynda.com – free online course | http://www.lynda.com/search?q=R |
| R-Statistics blog | http://www.r-statistics.com/ |
| rOpenSci – community effort for creating open tools for open science | http://ropensci.org/ |
| Stanford.edu – free online course | http://online.stanford.edu/course/introduction-statistical-learning |
| UCLA.edu – extensive set of guides for learning statistics and R from beginner to advanced levels | http://www.ats.ucla.edu/stat/r/ |
| VarianceExplained.org – free online course | http://varianceexplained.org/RData/ |
| Vimeo.com – many free video tutorials | https://vimeo.com/search?q=%22r+tutorial%22 |
| YouTube.com – many free video tutorials | https://www.youtube.com/results?search\_query=%22R+tutorial%22 |