

R lessons for CRI R Workshop

2016 June 23-24

Introduction to R

- Before we start (*Data Carpentry*)
- Introduction to R (*Data Carpentry*)

Working with Data

- Starting with data (*Data Carpentry*)
- The `data.frame` class (*Data Carpentry*)

Data manipulation

- Data manipulation using `dplyr` (*Data Carpentry*)
- Reshaping data frames: `dplyr` reshape
- Joining data frames: `dplyr` join

Data visualization

- Plotting with the base package
- Plotting with `ggplot2` (*Data Carpentry*)

Computing

- Control structures
- Writing functions

Statistical tests in R

- Linear regression: Simple and multiple
- Analysis of variance: One-way and two-way

Pull it all together

- Data Workflow Challenge
- Data Workflow Challenge: One possible solution