

BIOF 017: Introductory R Boot Camp

In this workshop, learners will learn the basics of how to use R to wrangle data, create visualizations, and conduct exploratory analyses. The workshop will use the popular “tidyverse” suite of packages and will also teach learners the concept of tidy data and how it facilitates analysis.

Learning Objectives

- Use RStudio and the tidyverse suite of packages to load and work with datasets
- Describe what makes data “tidy,” why tidy data is useful to work with, and how to make datasets tidy
- Transform data to prepare it for visualization and analysis
- Describe the “Grammar of Graphics” philosophy that underlies the ggplot2 visualization package
- Create visualizations including barplots, scatterplots, line graphs, and more using ggplot2
- Customize all aspects of visualizations
- Save and export visualizations for print, submission to journals, and other applications
- Use visualizations to explore and identify patterns in data Identify and handle missing data Identify covariation in variables
- Build simple linear models to identify relationships between variables

Class Type: Workshop

Program: Bioinformatics and Data Science