BIOF 019: Designing Effective Data Visualizations in R

This workshop will explore both the design side and the coding side of creating visualizations in R. The first session will introduce best practices for designing effective visualizations, and learners will put these into practice in the next two sessions to create static and interactive visualizations. Learners will be introduced to Shiny, an R package used to build interactive web apps.

Learning Objectives

- Understand how to use principles of human visual perception to create effective visualizations
- Describe elements of design such as line, shape, value, texture, and space and understand how to effectively use them in visualizations
- Use color to convey meaning, including using color-blind friendly palettes
- 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
- Understand how to use the UI and server functions to create Shiny objects
- Create visualizations that change based on user input
- Build simple web apps incorporating visualizations

Class Type: Workshop
Prerequisites:
BIOF 017
BIOF 018
BIOF 043
BIOF 339
BIOF 501
Any one of the above FAES R courses or workshops* or equivalent experience with adequate knowledge of coding in R.
Program: Bioinformatics and Data Science