

# Data Visualization I



USC SPEC Lab Summer 2024

**The goal:** In this module, you'll learn to visualize data with various graph types using the ggplot2 package. By the end of this module, you will be able to construct histograms, kernel density plots, and boxplots, as well as customize elements of the plots like colors, line types, and titles to create comprehensive graphs and assembling multiple graphs into a single figure.

## 1. Introductory Videos

[R Data Visualization: The Big Picture](#)

[Creating Histograms Using ggplot2 in R](#)

[Creating plots using geom\\_density\(\) and geom\\_line\(\) from ggplot2](#)

[Formatting Plots linetypes and colors and using facet\\_wrap\(\) from ggplot2](#)

[Creating Plots using geom\\_boxplot\(\) and saving plots from ggplot2](#)

## 2. Walk Through Work

Walkthrough 1: Histograms, Kernel Density Plots and Bar Plots

Walkthrough 2: Customize Plots

Titles, Labels, and Other Aesthetics

## 3. Group Work

Practicing Plotting Renewable Energy Consumption by Year

## 4. Individual Work

Homework Problem Set

## Resources

R Studio Cheat Sheets

- [Data Transformation with dplyr](#)
- [Data Import with readr, readxl, and googlesheets4](#)
- [ggplot2 cheatsheet](#)

