

# Data Visualization I



USC SPEC Lab Summer 2022

**The goal:** In this module, we are going to learn to visualize data using several different graphs. Although we will briefly go over the graphics package, our Data Visualization modules focus on the package 'ggplot2'. By the end of this module, you should be able to create basic histograms, kernel density plots, and boxplots. We show you how to manipulate colors, line types, graph titles, and even how to create multiple plots as part of a single figure.

## Introductory Videos

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

- data visualization principles and guidelines

### [1.2 Creating Histograms Using ggplot2 in R](#)

- uses of the ggplot2

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

- formatting options in ggplot2

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

- dealing with different data in ggplot2

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

- managing created plots in ggplot2

## 1. Walk Through Work

Part I: Histograms and Kernel Density Plots

Part II: Titles, Labels, and Other Aesthetics

## 2. Group Work

Energy Use Plots to Match

## 3. Individual Work

Histogram practice

## Resources

[ggplot2 Cheat Sheets](#)