

## Intro to Data Visualization in R

- Understand how data visualization fits in the data science workflow and its importance
- Be able to install and load a package into R
- Understand what the tidyverse is and what is its purpose
- Work with the readR package to read in data
- Understand the different ways of exploring data and its use cases
  - Visualizing distributions
  - Visualizing categorical counts
  - Visualizing relationships between numeric variables
- Know the data visualization best practices (axis labels, titles, colors, figure sizes)
- Understand the three-layer process to plotting graphs in ggplot2
- Understand what the “fill” argument does and be able to compare plots using it
- Understand how to explore the distributions of columns of the data
  - Plotting histograms with ggplot2
  - Plotting density plots with ggplot2
  - Plotting boxplots with ggplot2
- Understand how to visualize categorical counts of the data
  - Plotting bar charts with ggplot2
  - Plotting horizontal bar charts with ggplot2
  - Plotting stacked bar charts with ggplot2
  - Plotting side by side bar charts with ggplot2
- Understand how to visualize relationships between numeric variables in data
  - Plotting scatter plots with ggplot2