Assignment_5

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Assignment 5

In this assignment you will:

- Work through the introduction to the *ggplot2* package found in the R-script "Assignment_5.R"
- Learn how to set up and modify a ggplot figure
- Learn how to save your image to a custom file
- Practice using ggplot to explore a data set by completing the assigned tasks below

All file paths should be relative, starting from the Assignment_5 directory!! (where you found this file)

This means that you need to create a new R-Project named "Assignment_5.Rproj" in your Assignment_5 directory, and work from scripts within that.

For credit . . .

1. Upload an r-script named LASTNAME_ggplot.R to Canvas
2. Push that same file to your GitHub repository along with any generated image files

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We will work through an R script called "Assignment_5.R"

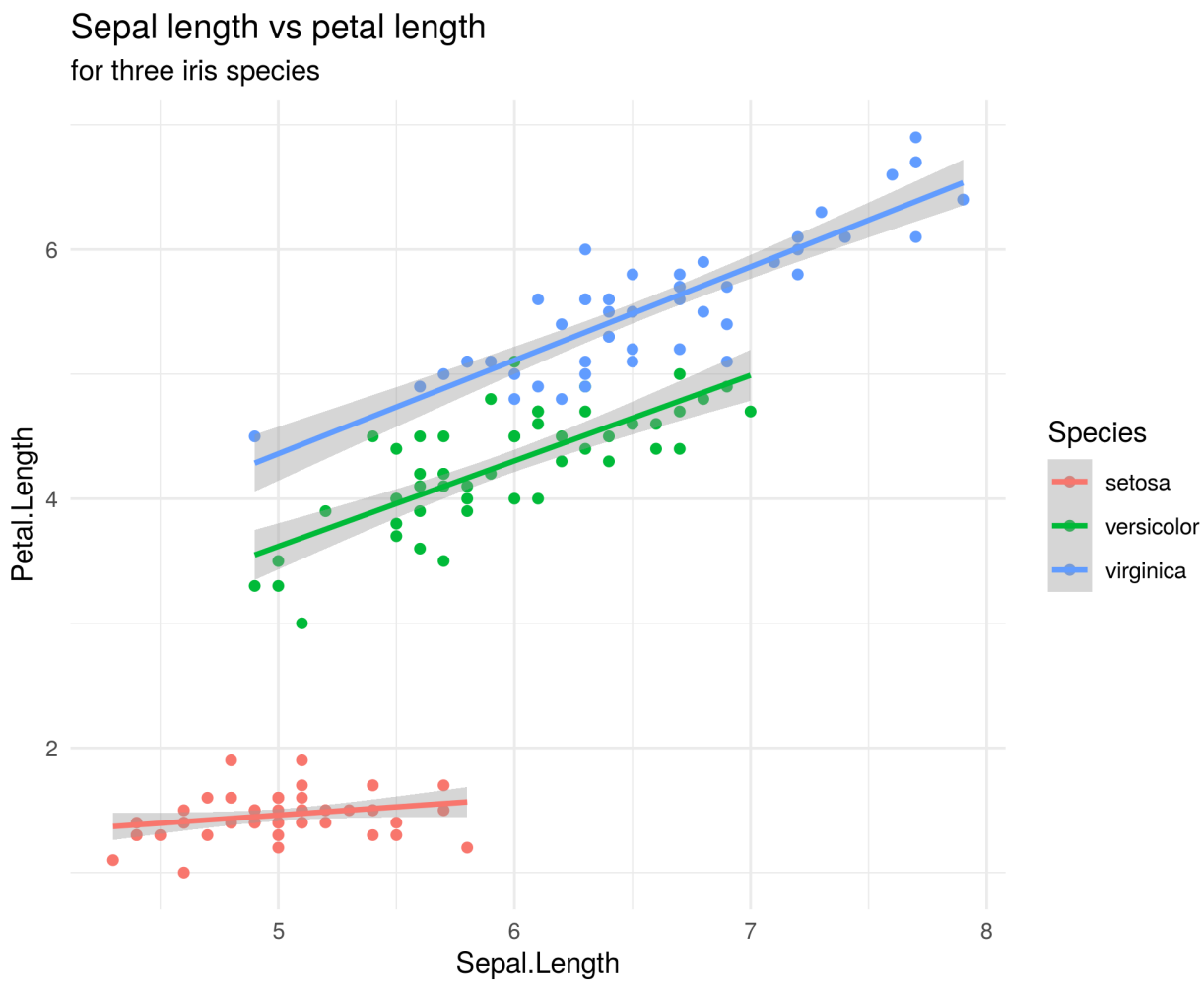
We will work through this script in class, pausing to understand what's going on at each point.

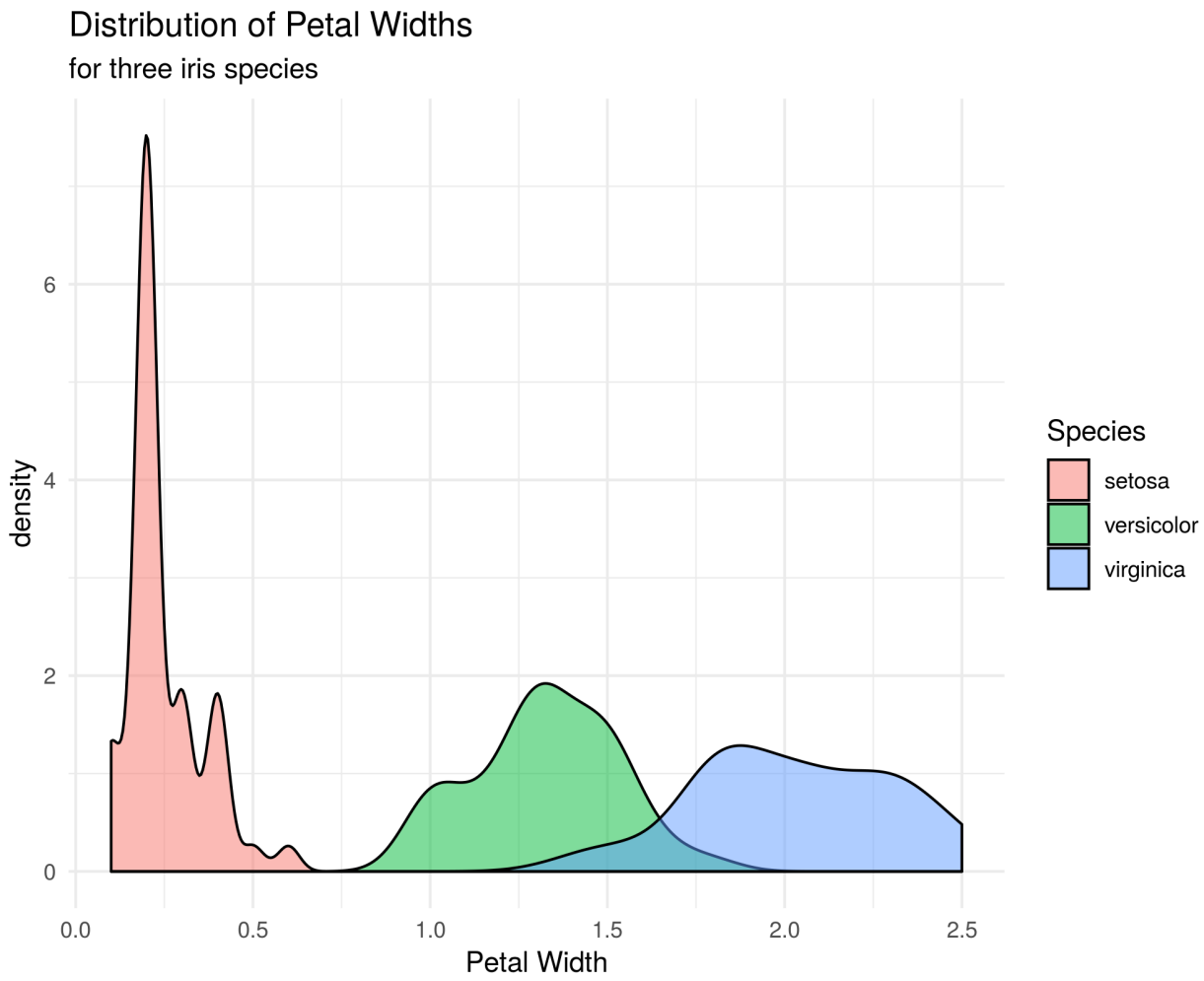
After you have grasped the basics of ggplot, complete the following tasks, generating nice-looking figures as directed:

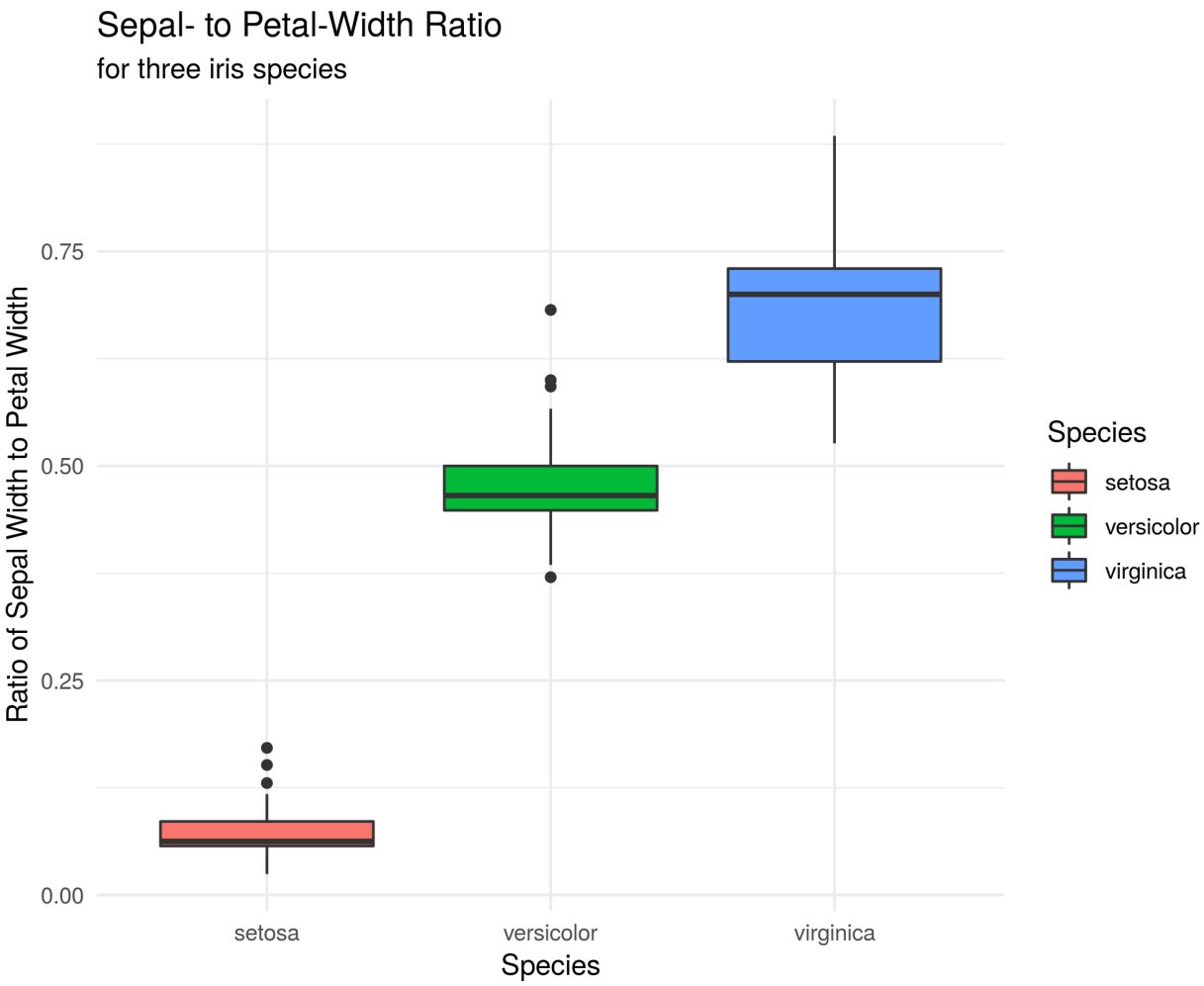
1. Load the "iris" data set
2. Duplicate the following 3 figures (on next 3 pages) and save them in your Assignment_5 directory as "iris_fig1.png", "iris_fig2.png", "iris_fig3.png", respectively.
3. Keep in mind that by default, I make most of my figures with theme_minimal()
4. Read through the different plot types on this website

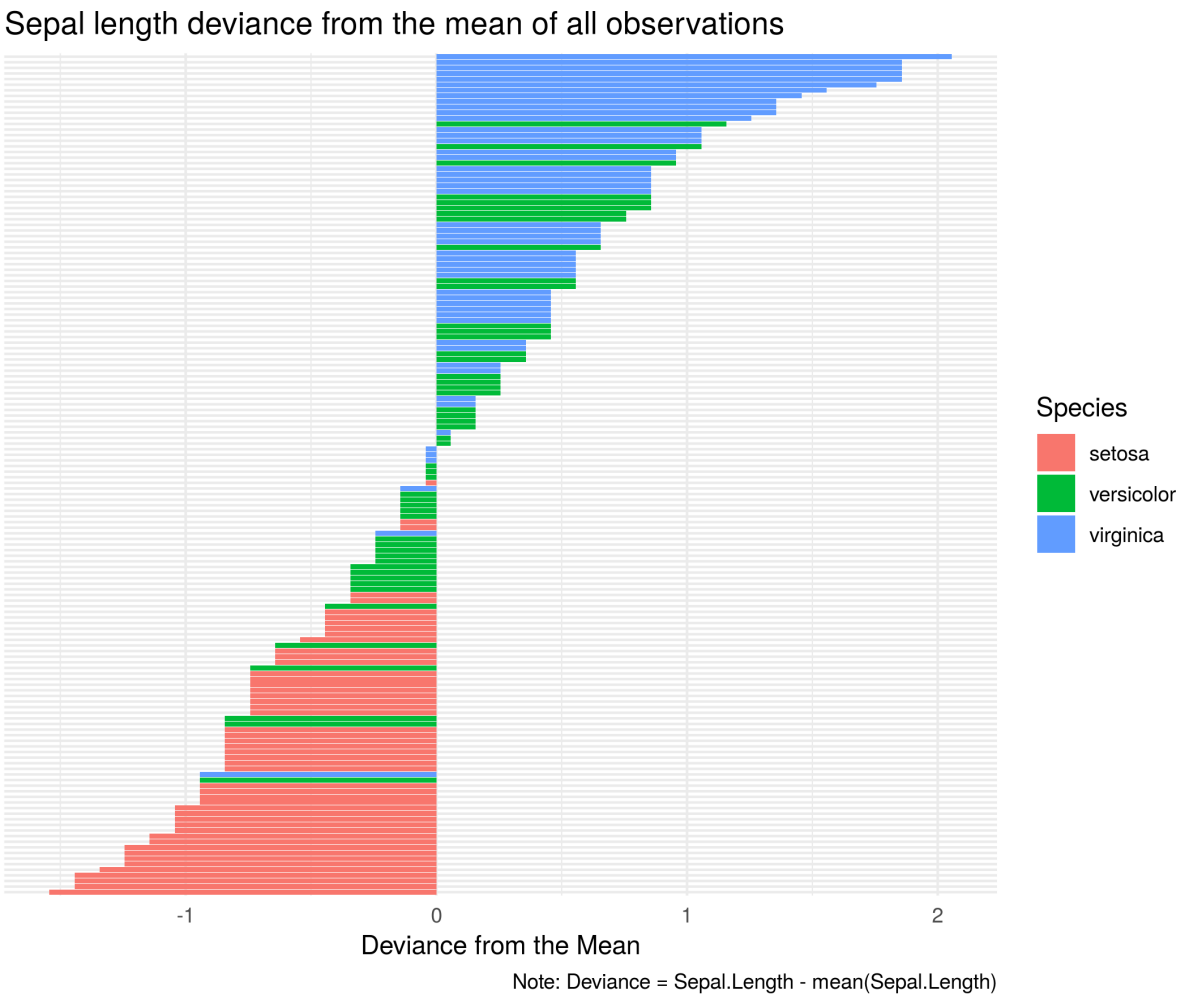
http://r-statistics.co/Top50-Ggplot2-Visualizations-MasterList-R-Code.html

and use the info to reproduce the fourth figure below. Save it as "iris_fig4.png" This last task requires you to use the internet to solve a tricky R task. This is the most important skill you can learn in this course! You'll probably have to figure out some functions you've not seen before and reconfigure them to the iris data.


Sepal length vs petal length
for three iris species
Petal.Length
Sepal.Length
6
4
2
5
6
7
8
Species
setosa
versicolor
virginica


Distribution of Petal Widths
for three iris species
density
Petal Width
0
2
4
6
0.0
0.5
1.0
1.5
2.0
2.5
Species
setosa
versicolor
virginica


Sepal- to Petal-Width Ratio
for three iris species
Ratio of Sepal Width to Petal Width
0.75
0.50
0.25
0.00
setosa
versicolor
virginica
Species
Species
setosa
versicolor
virginica


Sepal length deviance from the mean of all observations
Species
setosa
versicolor
virginica
-1
0
1
2
Deviance from the Mean
Note: Deviance = Sepal.Length - mean(Sepal.Length)