

Data Science with R

Assignment 2

Question 1 (Base R):

Using the `iris` dataset, create the following visualizations with **base R plotting functions**:

1. A scatter plot of `Sepal.Length` versus `Sepal.Width` with axis labels and a title.
2. A histogram of `Petal.Length` with appropriate breaks and color.
3. A boxplot of `Sepal.Length` grouped by `Species`.

Briefly describe what each plot reveals about the dataset.

Question 2 (ggplot2):

Using the `iris` dataset, create the following visualizations with **ggplot2**:

1. A scatter plot of `Sepal.Length` vs. `Sepal.Width`, with points colored by `Species`.
2. A bar chart showing the number of observations for each `Species`.
3. A density plot of `Petal.Length` filled by `Species`.

Compare the `ggplot2` visualizations with the base R ones. Discuss at least two advantages of using `ggplot2` for more complex or polished plots.