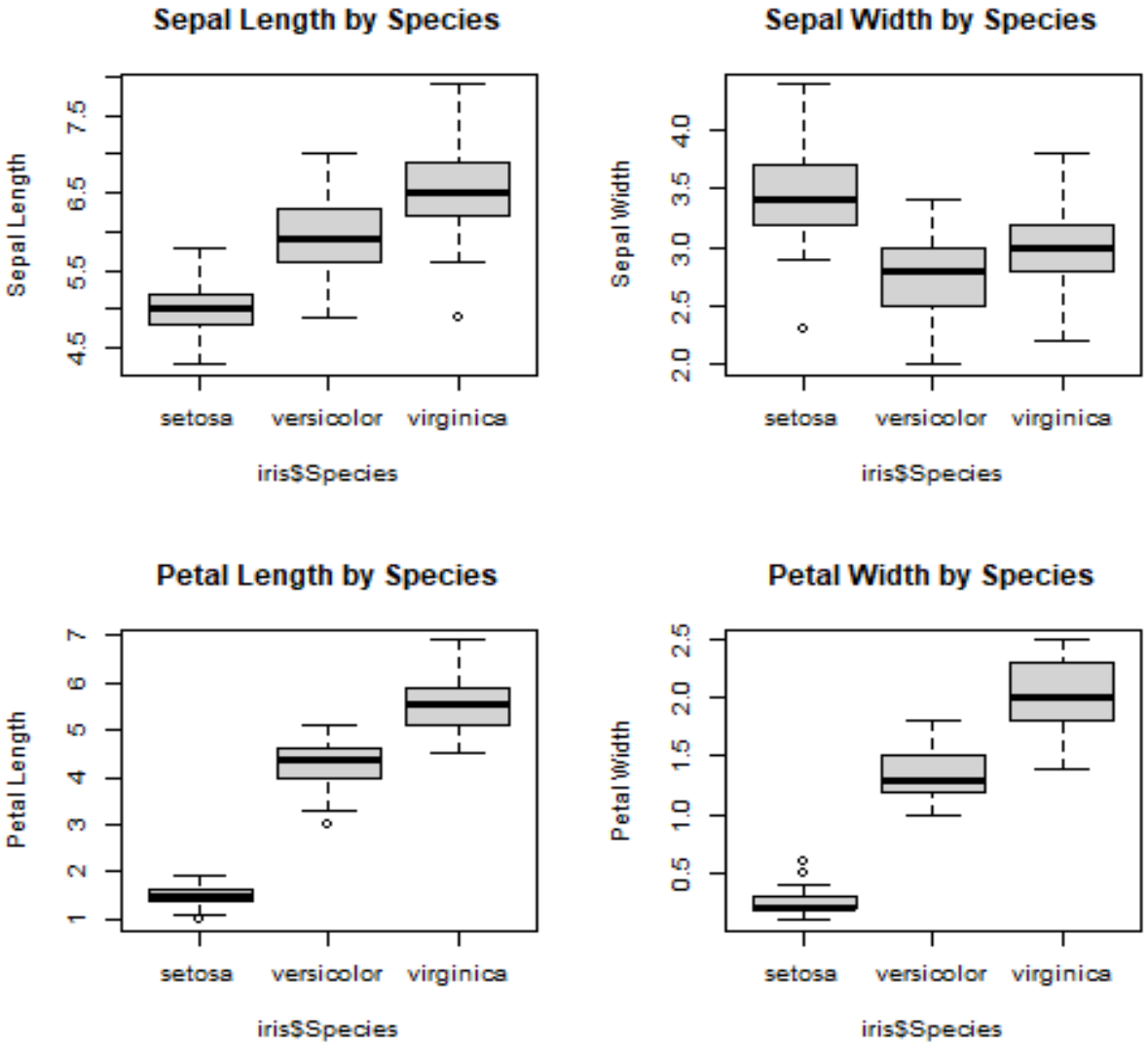
I. Boxplots

The boxplots illustrate the distribution of the sepal length, sepal width, petal length, and petal width across the three species of iris flowers.

- ✓ **Sepal Length by Species**: There is a clear distinction between the species. Setosa tends to have shorter sepals, while Virginica has the longest.
- ✓ **Sepal Width by Species**: Setosa has wider sepals on average, with less overlap between species compared to sepal length.
- ✓ **Petal Length by Species**: There is a significant difference in petal lengths between species. Setosa has very short petals, Versicolor has medium-length petals, and Virginica has the longest petals, indicating that petal length is a strong distinguishing feature.
- ✓ **Petal Width by Species**: Similar to petal length, petal width is markedly different among the species, with Setosa having the narrowest petals and Virginica the widest.



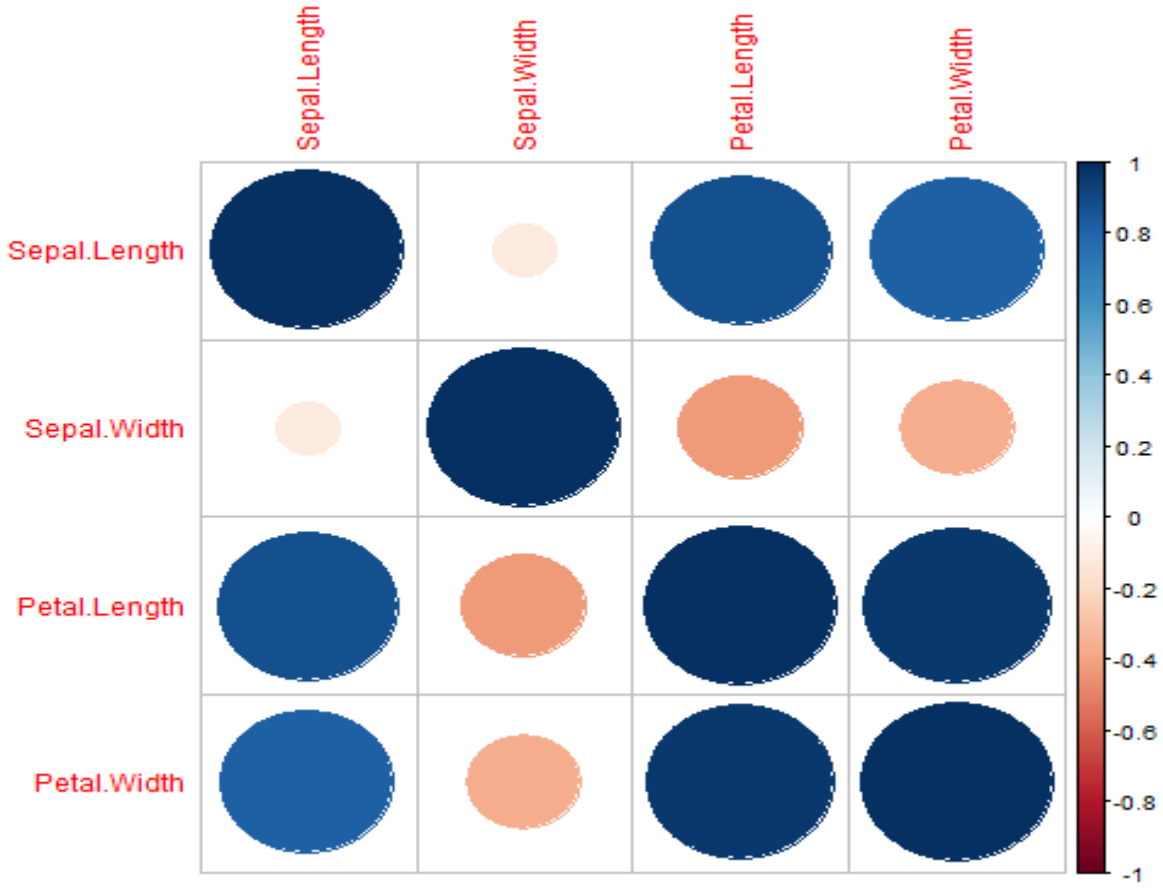
II. Correlation heatmap

The correlation heatmap shows the relationship between different measurements:

Strong Positive Correlation: There's a strong positive correlation between petal length and petal width, which means as one increases, the other tends to as well.

Moderate Positive Correlation: Sepal length has a moderate positive correlation with petal length and width.

Weak Correlation: Sepal width has a weak negative correlation with petal length and width, indicating that as sepal width increases, petal length and width tend to decrease slightly.

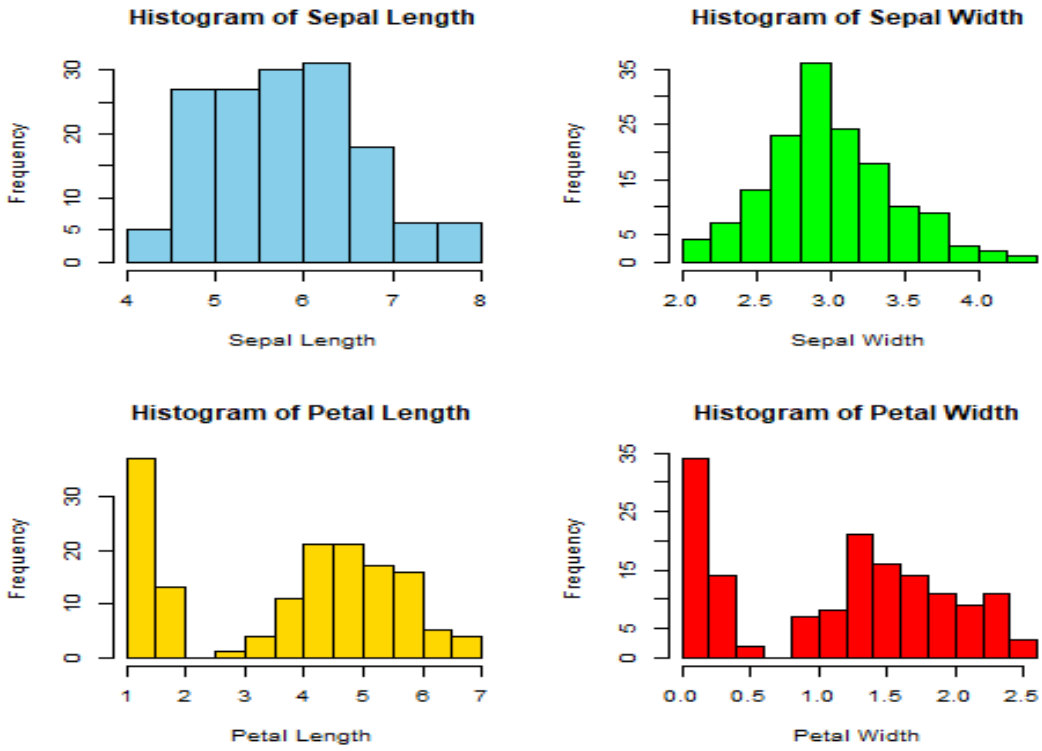


III. Histograms

The histograms provide insight into the distribution of each feature:

Sepal Length and Width: Both seem to follow a roughly normal distribution, indicating a variety of measurements that center around a mean.

Petal Length and Width: These show a bimodal distribution, reflecting the presence of different species with different petal sizes.



IV. Scatter plots

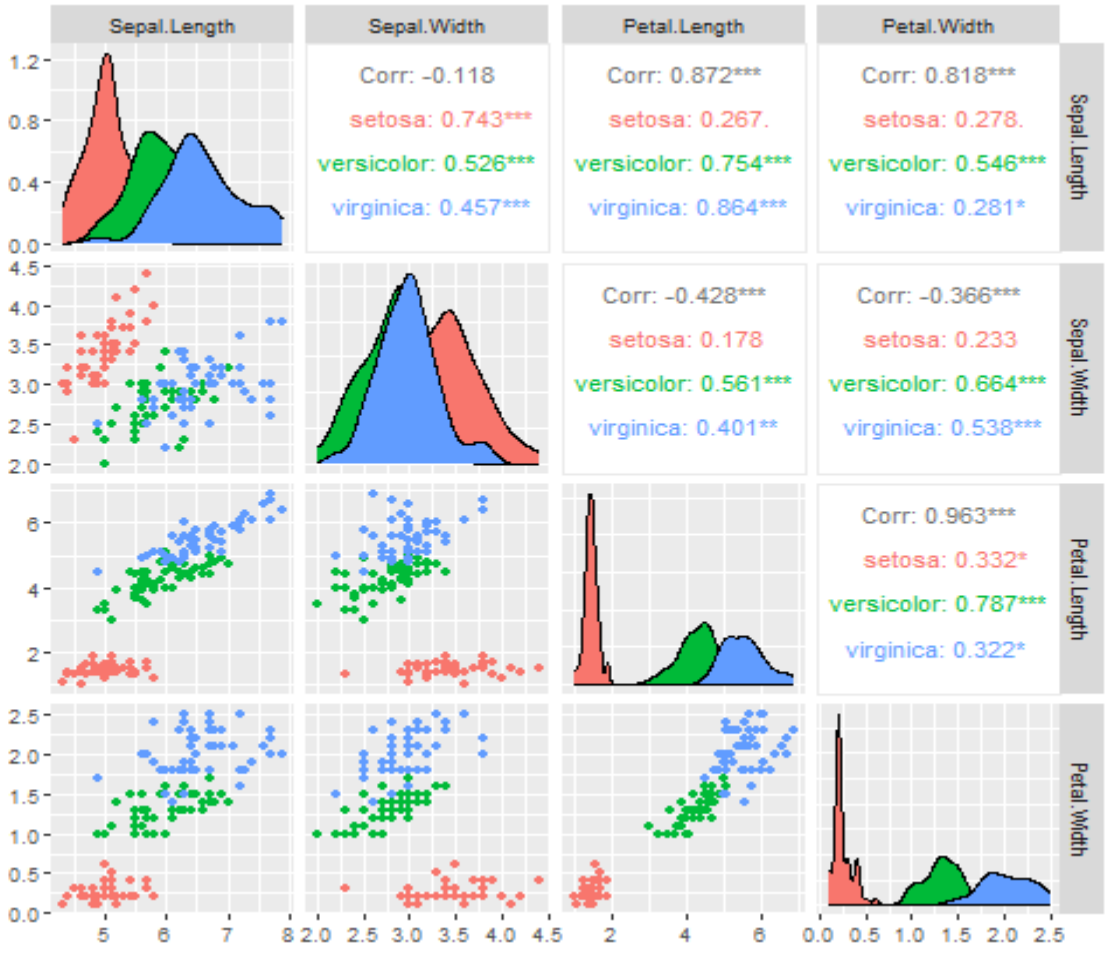
The scatter plots include density plots on the diagonal, bivariate scatter plots with regression lines off the diagonal, and the correlation coefficient:

Clear Grouping: There is a clear grouping of species based on petal length and width.

Species Overlap: There's more overlap between Versicolor and Virginica based on sepal width and length.

Correlation: The correlation coefficients confirm the relationships observed in the heatmap, with high values for petal measurements.

These visualizations together tell a compelling story about the iris dataset, illustrating the distinctiveness of each species based on morphological measurements and the relationships between those measurements.


Sepal.Length
Sepal.Width
Petal.Length
Petal.Width
Corr: -0.118
setosa: 0.743***
versicolor: 0.526***
virginica: 0.457***
Corr: 0.872***
setosa: 0.267.
versicolor: 0.754***
virginica: 0.864***
Corr: 0.818***
setosa: 0.278.
versicolor: 0.546***
virginica: 0.281*
Corr: -0.428***
setosa: 0.178
versicolor: 0.561***
virginica: 0.401**
Corr: -0.366***
setosa: 0.233
versicolor: 0.664***
virginica: 0.538***
Corr: 0.963***
setosa: 0.332*
versicolor: 0.787***
virginica: 0.322*