# **Exp. No: 10**

# VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

## 1. Scatter Plot

# Install ggplot2 (if not already installed)

install.packages("ggplot2")

# Load the ggplot2 package

library(ggplot2)

# Scatter plot of Sepal.Length vs Sepal.Width, colored by Species

ggplot(data = iris, aes(x = Sepal.Length, y = Sepal.Width, color = Species)) +

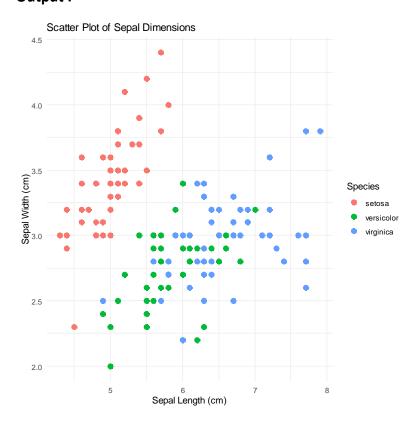
geom\_point(size = 3) + # Adds points

labs(title = "Scatter Plot of Sepal Dimensions",

x = "Sepal Length (cm)",

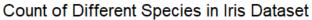
y = "Sepal Width (cm)") + # Adds axis labels and title

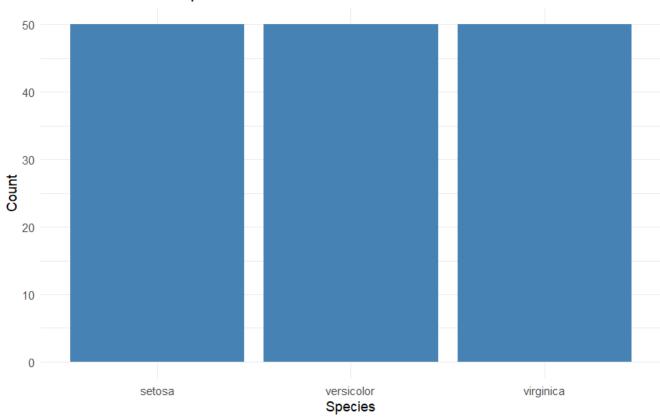
theme\_minimal() # Applies a minimal theme



#### 2. Bar Chart

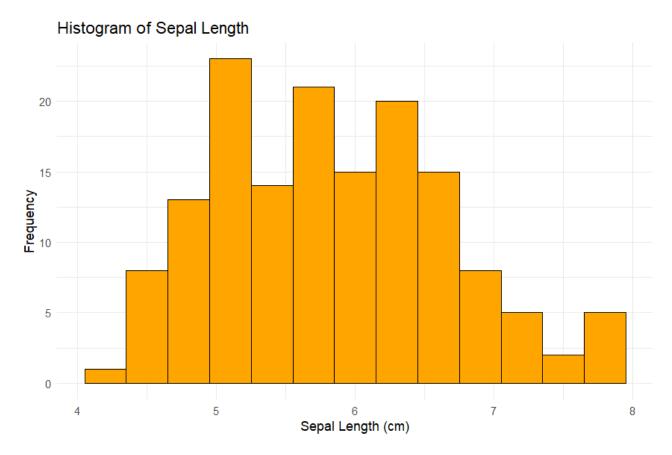
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")
# Load the ggplot2 package
library(ggplot2)
# Bar plot of Species counts
ggplot(data = iris, aes(x = Species)) +
geom_bar(fill = "steelblue") + # Adds bars filled with steel blue color
labs(title = "Count of Different Species in Iris Dataset",
x = "Species",
y = "Count") +
theme_minimal()
```





# 3. Histogram

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")
# Load the ggplot2 package
library(ggplot2)
# Histogram of Sepal Length
ggplot(data = iris, aes(x = Sepal.Length)) +
geom_histogram(binwidth = 0.3, fill = "orange", color = "black") + # Adds histogram bars
labs(title = "Histogram of Sepal Length",
x = "Sepal Length (cm)",
y = "Frequency") +
theme_minimal()
```



#### 4. Box Plot

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")
# Load the ggplot2 package
library(ggplot2)
# Box plot of Sepal Length for each Species
ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +
geom_boxplot() + # Adds box plot
labs(title = "Box Plot of Sepal Length by Species",
x = "Species",
y = "Sepal Length (cm)") +
theme_minimal()
```

