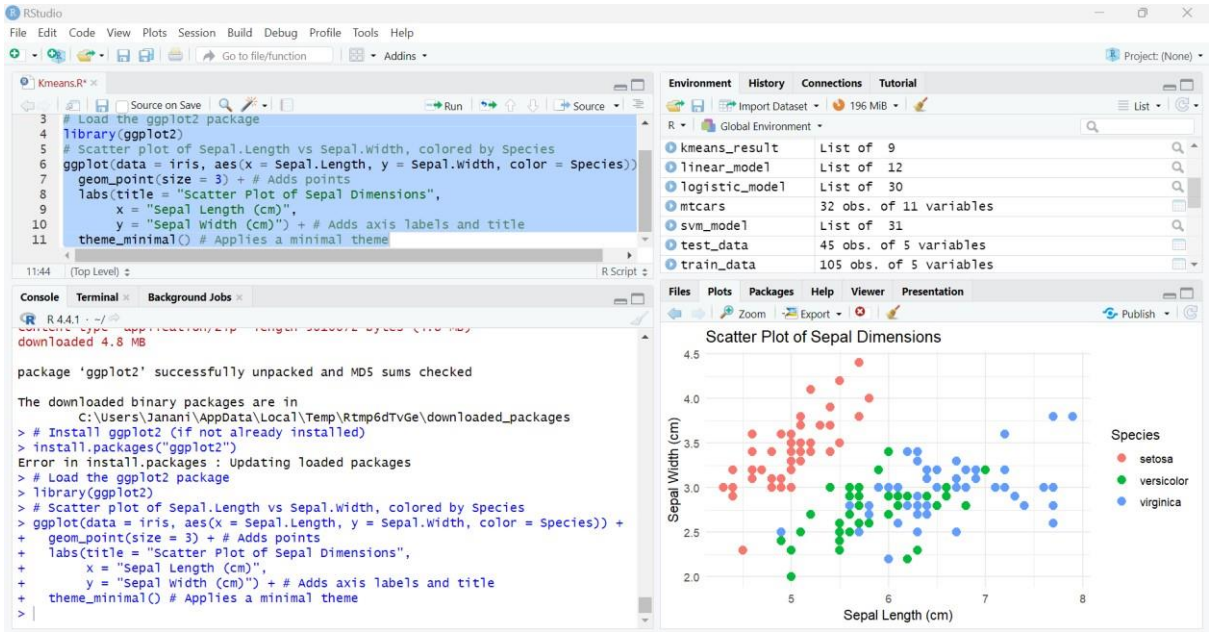
**Exp:10**

## VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

### 1) SCATTER PLOT

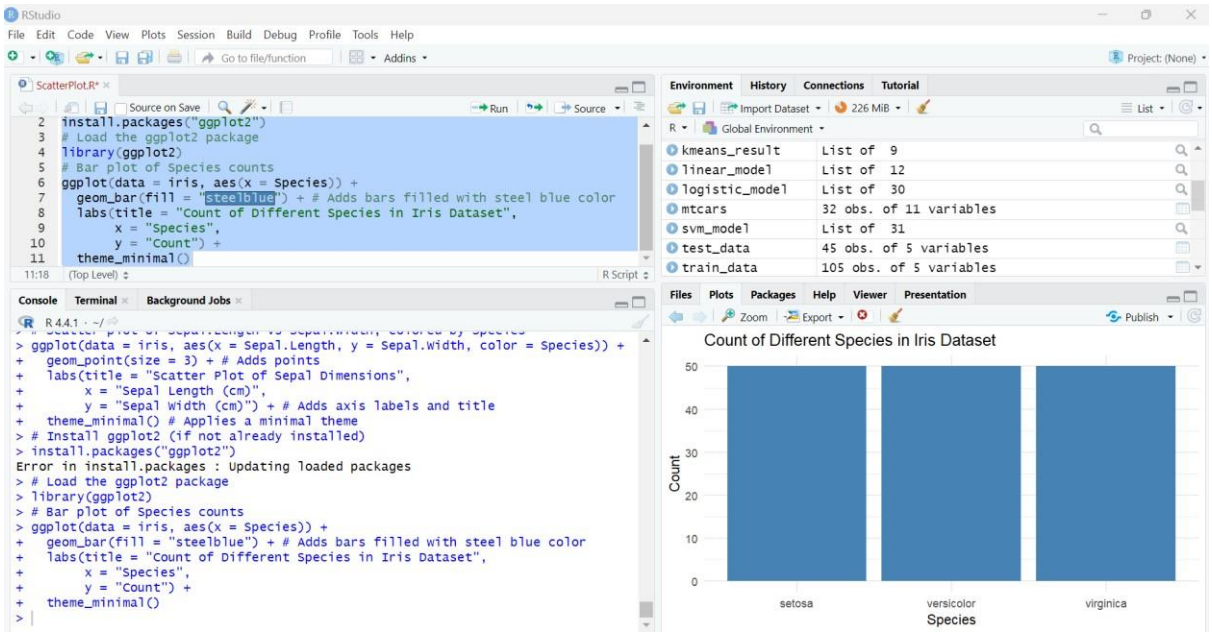
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2") # Load the
ggplot2 package library(ggplot2)
# Scatter plot of Sepal.Length vs Sepal.Width, colored by Species ggplot(data
= iris, aes(x = Sepal.Length, y = Sepal.Width, color = Species)) +
geom_point(size = 3) + # Adds points
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

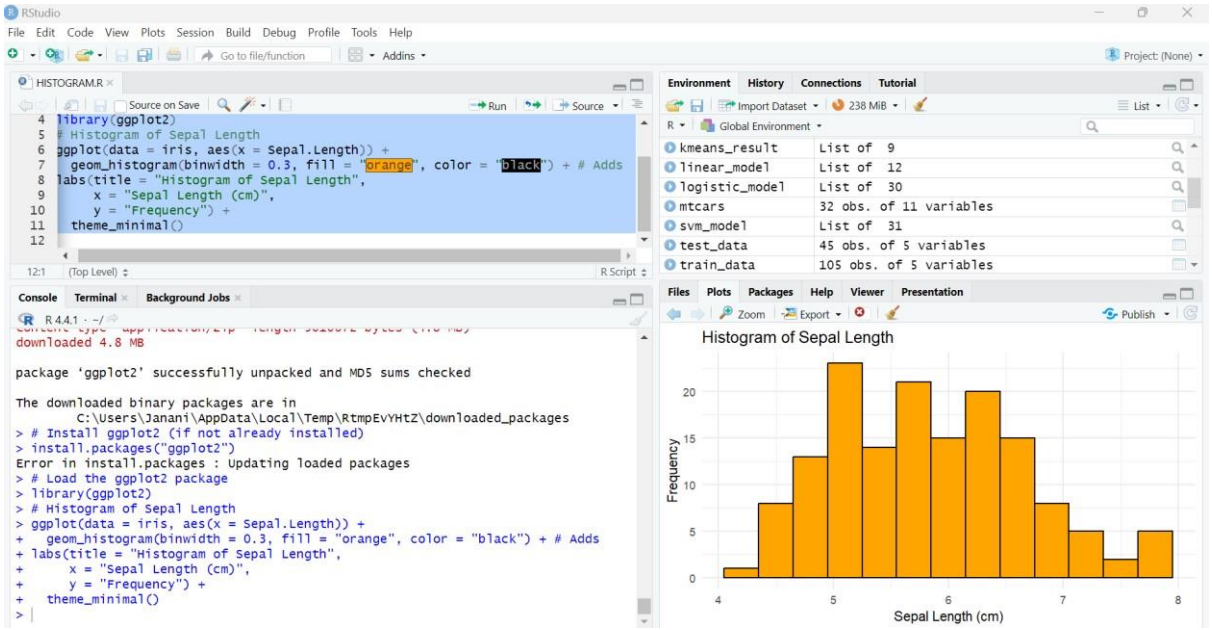
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2") # Load the
ggplot2 package library(ggplot2)
```

```
# 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)

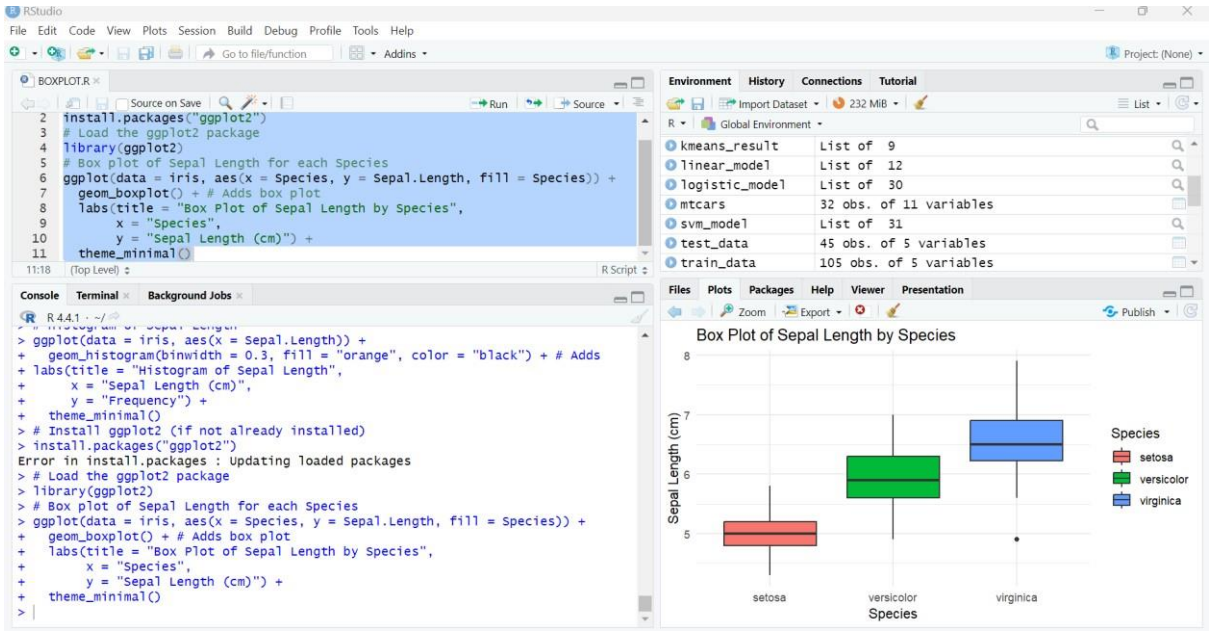
# Box plot of Sepal Length for each Species

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()


RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
BOXPLOT.R
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()
Environment History Connections Tutorial
kmeans_result List of 9
linear_model List of 12
logistic_model List of 30
mtcars 32 obs. of 11 variables
svm_model List of 31
test_data 45 obs. of 5 variables
train_data 105 obs. of 5 variables
Console Terminal Background Jobs
> ggplot(data = iris, aes(x = Sepal.Length)) +
+ geom_histogram(binwidth = 0.3, fill = "orange", color = "black") + # Adds
+ labs(title = "Histogram of Sepal Length",
+ x = "Sepal Length (cm)",
+ y = "Frequency") +
+ theme_minimal()
> # Install ggplot2 (if not already installed)
> install.packages("ggplot2")
Error in install.packages : Updating loaded packages
> # 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()
Files Plots Packages Help Viewer Presentation
Box Plot of Sepal Length by Species
Sepal Length (cm)
Species
setosa
versicolor
virginica