**Week 1: R Programming Assignment**

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(IS---5213-2O1--OL-SP-2023 - Data Science and Big Data)

(DONALD WEDDING)

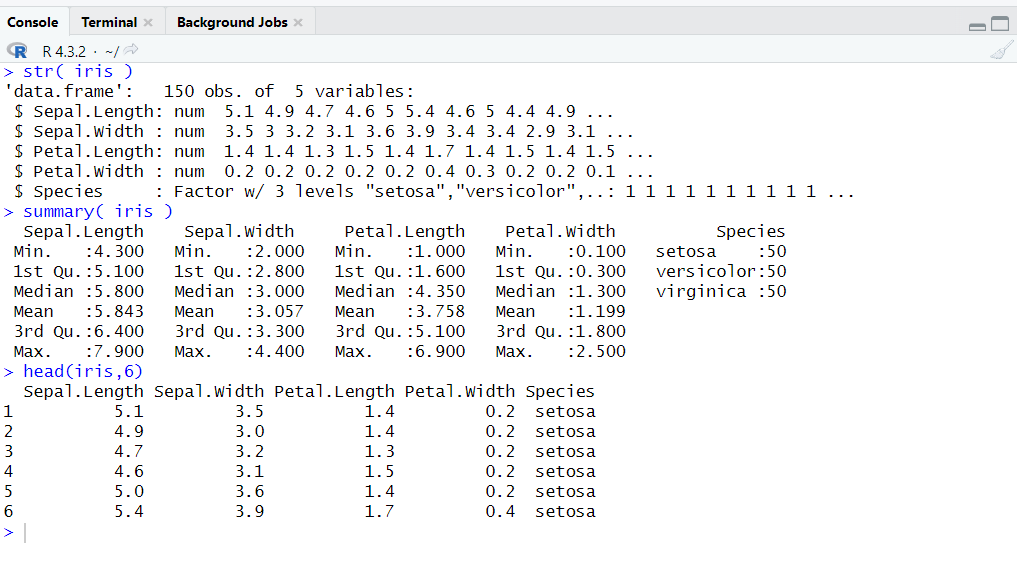
(14 Jan 2024)

**Step 1: Describe the Data**

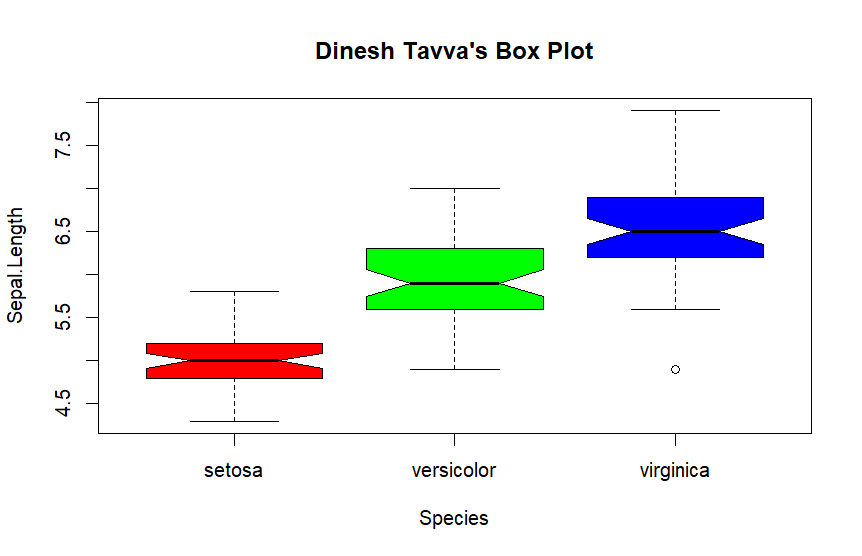
str( iris )

summary( iris )

head(iris,6)



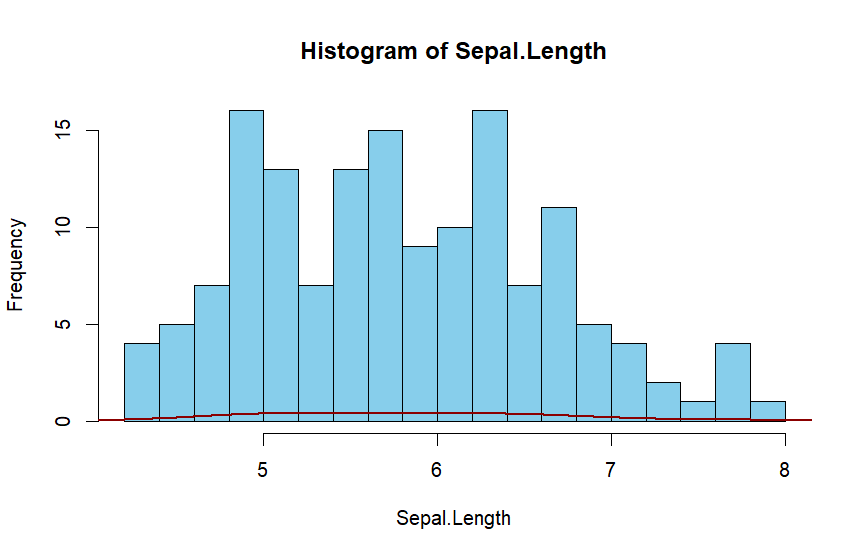
**Step 2: Box-Whisker Plots**

boxplot(Sepal.Length ~ Species, data = iris, notch = TRUE, col = c("red", "green", "blue"), main = "Dinesh Tavva's Box Plot")

**Step 3: Histograms**

hist(iris$Sepal.Length, breaks = 20, col = "skyblue", main = "Histogram of Sepal.Length", xlab = "Sepal.Length")

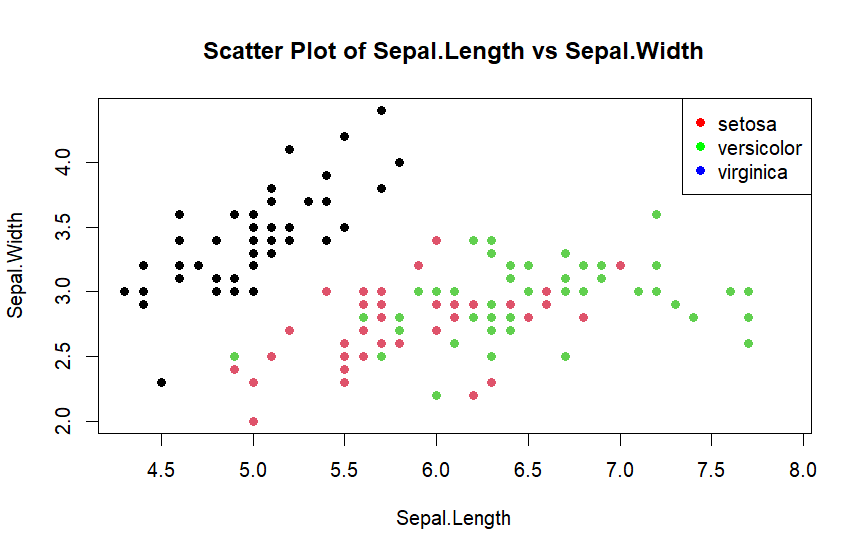
lines(density(iris$Sepal.Length), col = "darkred", lwd = 2)



**Step 4: Scatter Plots**

plot(iris$Sepal.Length, iris$Sepal.Width, col = as.numeric(iris$Species), pch = 16, main = "Scatter Plot of Sepal.Length vs Sepal.Width", xlab = "Sepal.Length", ylab = "Sepal.Width")

legend("topright", legend = levels(iris$Species), col = c("red", "green", "blue"), pch = 16)



**Step 5: Simple Math**

mean\_value <- mean(iris$Sepal.Length)

print(mean\_value)

median\_value <- median(iris$Sepal.Length)

print(median\_value)

minimum\_value <- min(iris$Sepal.Length)

print(minimum\_value)

maximum\_value <- max(iris$Sepal.Length)

print(maximum\_value)

standard\_deviation\_value <- sd(iris$Sepal.Length)

print(standard\_deviation\_value)

median\_species <- tapply(iris$Sepal.Length, iris$Species, median)

sorted\_median\_species <- sort(median\_species, decreasing = TRUE)

**Output:**

