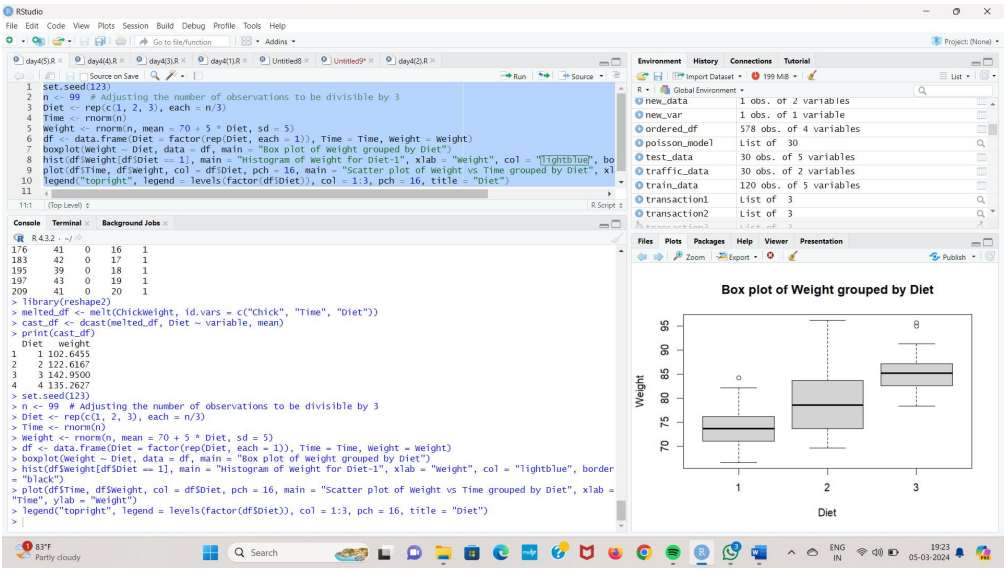
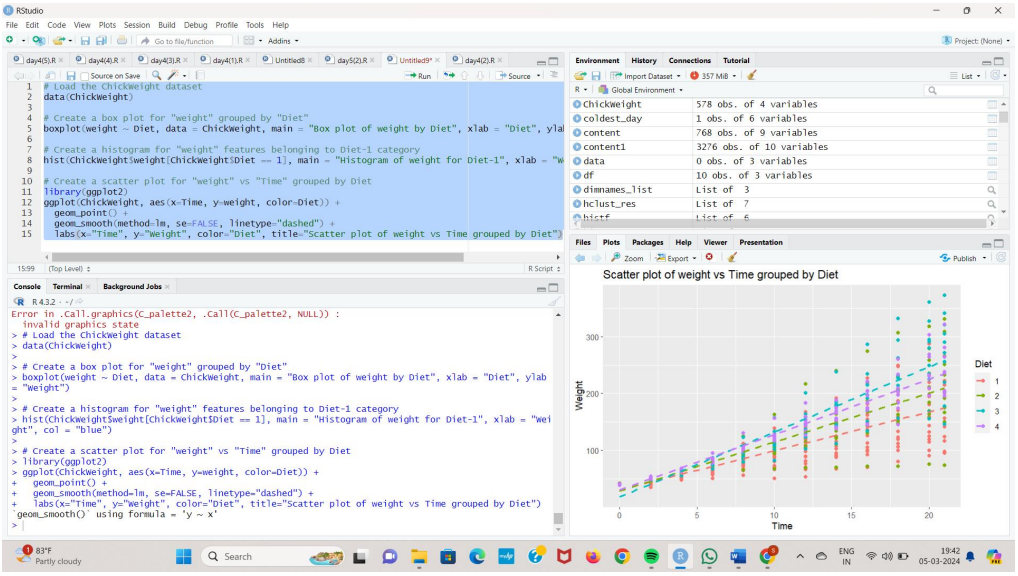
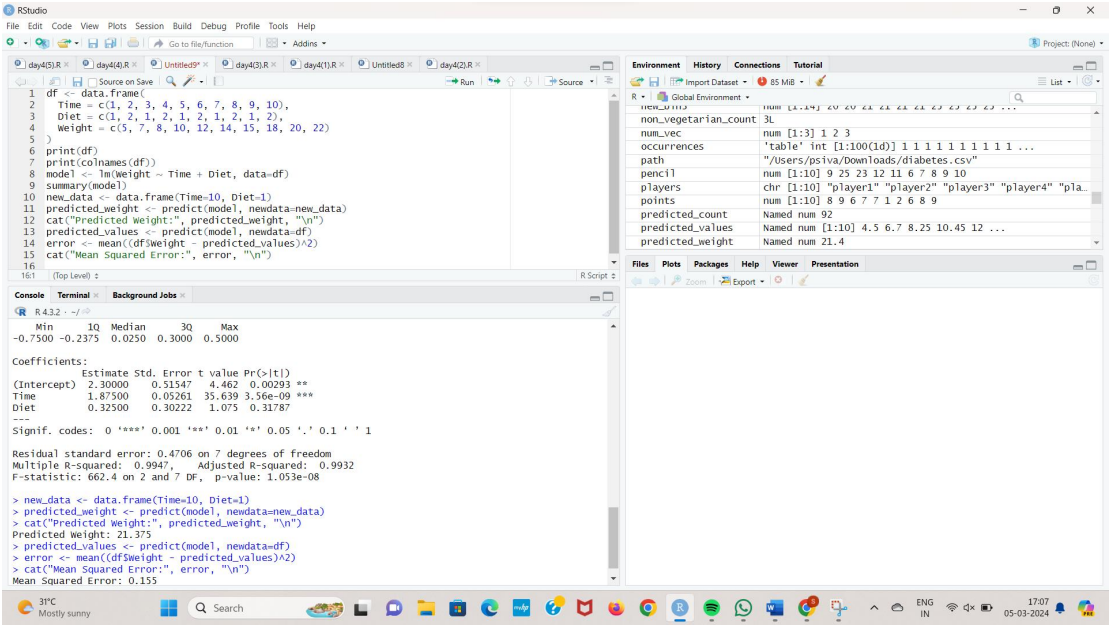
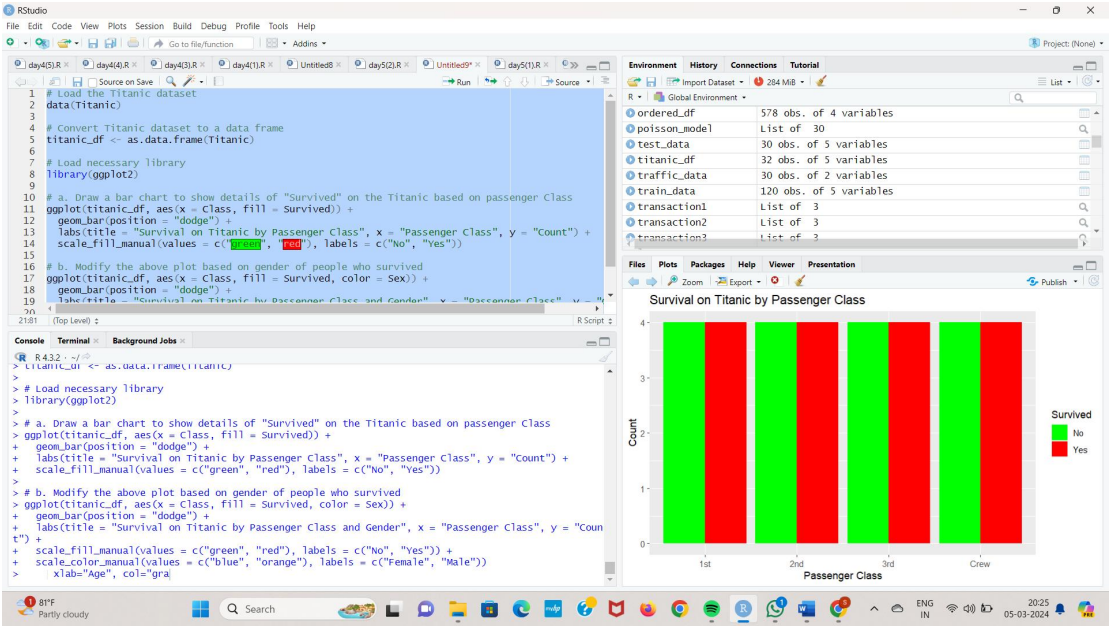
LAB EXPERIMENTS (DAY 5)






RStudio
df <- data.frame(
Time = c(1, 2, 3, 4, 5, 6, 7, 8, 9, 10),
Diet = c(1, 2, 1, 2, 1, 2, 1, 2, 1, 2),
Weight = c(5, 7, 8, 10, 12, 14, 15, 18, 20, 22)
)
print(df)
print(colnames(df))
model <- lm(Weight ~ Time + Diet, data=df)
summary(model)
new_data <- data.frame(Time=10, Diet=1)
predicted_weight <- predict(model, newdata=new_data)
cat("Predicted Weight:", predicted_weight, "\n")
predicted_values <- predict(model, newdata=df)
error <- mean((df$Weight - predicted_values)^2)
cat("Mean Squared Error:", error, "\n")
Min 1Q Median 3Q Max
-0.7500 -0.2375 0.0250 0.3000 0.5000
Coefficients:
Estimate Std. Error t value Pr(>|t|)
(Intercept) 2.30000 0.51547 4.462 0.00293 **
Time 1.87500 0.05261 35.639 3.56e-09 ***
Diet 0.32500 0.30222 1.075 0.31787
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 0.4706 on 7 degrees of freedom
Multiple R-squared: 0.9947, Adjusted R-squared: 0.9932
F-statistic: 662.4 on 2 and 7 DF, p-value: 1.053e-08
> new_data <- data.frame(Time=10, Diet=1)
> predicted_weight <- predict(model, newdata=new_data)
> cat("Predicted Weight:", predicted_weight, "\n")
Predicted Weight: 21.375
> predicted_values <- predict(model, newdata=df)
> error <- mean((df$Weight - predicted_values)^2)
> cat("Mean Squared Error:", error, "\n")
Mean Squared Error: 0.155
non_vegetarian_count 3L
num_vec num [1:3] 1 2 3
occurrences 'table' int [1:100(1d)] 1 1 1 1 1 1 1 1 1 1 ...
path "/Users/psiva/Downloads/diabetes.csv"
pencil num [1:10] 9 25 23 12 11 6 7 8 9 10
players chr [1:10] "player1" "player2" "player3" "player4" "pla...
points num [1:10] 8 9 6 7 7 1 2 6 8 9
predicted_count Named num 92
predicted_values Named num [1:10] 4.5 6.7 8.25 10.45 12 ...
predicted_weight Named num 21.4
31°C
Mostly sunny
Search
ENG
IN
17:07
05-03-2024


RStudio
# Load the Titanic dataset
data(Titanic)
# Convert Titanic dataset to a data frame
titanic_df <- as.data.frame(Titanic)
# Load necessary library
library(ggplot2)
# a. Draw a bar chart to show details of "Survived" on the Titanic based on passenger Class
ggplot(titanic_df, aes(x = Class, fill = Survived)) +
geom_bar(position = "dodge") +
labs(title = "Survival on Titanic by Passenger Class", x = "Passenger Class", y = "Count") +
scale_fill_manual(values = c("green", "red"), labels = c("No", "Yes"))
# b. Modify the above plot based on gender of people who survived
ggplot(titanic_df, aes(x = Class, fill = Survived, color = Sex)) +
geom_bar(position = "dodge") +
labs(title = "Survival on Titanic by Passenger Class and Gender", x = "Passenger Class", y = "Count") +
scale_fill_manual(values = c("green", "red"), labels = c("No", "Yes")) +
scale_color_manual(values = c("blue", "orange"), labels = c("Female", "Male"))
xlab="Age", col="gra
Survival on Titanic by Passenger Class
Count
Passenger Class
1st
2nd
3rd
Crew
Survived
No
Yes
81°F
Partly cloudy
Search
ENG
IN
20:25
05-03-2024