

MVLU COLLEGE

Aim: Performing two-way ANOVA using aov() (R).

RStudio interface showing the script editor with R code for performing a two-way ANOVA and the environment pane displaying the resulting ANOVA results.

```

practical_8.R* 
1 print("Name: S126 Hariprasad")
2
3 # 1. Select the 'Most Runs - 2020.csv' file manually
4 data <- read.csv(file.choose())
5
6 # 2. Prepare the data
7 # Convert '100' and '50' columns into Factors (categories) for ANOVA
8 # This allows us to see if having a 100 or a 50 significantly impacts total Runs
9 data$Has_100 <- as.factor(ifelse(data$X100 > 0, "Yes", "No"))
10 data$Has_50 <- as.factor(ifelse(data$X50 > 0, "Yes", "No"))
11
12 # 3. Perform Two-Way ANOVA
13 # Aim: Test if total 'Runs' are affected by scoring a Century and/or a Half-century
14 aov_result <- aov(Runs ~ Has_100 * Has_50, data = data)
15
16 # 4. view the ANOVA table results
17 summary(aov_result)
18
19 # 5. Preview the processed data
20 head(data[, c("Player", "Runs", "Has_100", "Has_50")])
21

```

Environment pane:

- anova_resu... List of 13
- \$ coefficients : Named num [1:4] 35.4 19...
- ..- attr(*, "names")= chr [1:4] "(Inter..."
- \$ residuals : Named num [1:133] 1/1 1...
- ..- attr(*, "names")= chr [1:133] "1" ...
- \$ effects : Named num [1:133] -1605...
- ..- attr(*, "names")= chr [1:133] "(Int..."

Files pane:

- RData 78.4 KB Dec 13
- .Rhistory 20.5 KB Jan 5, 2023
- BackgroundShaker.cs 658 B Aug 1, 2023
- Custom Office Templates
- desktop.ini 402 B Sep 3, 2023
- example.html 167 B Aug 2, 2023
- fuel_sales.csv 768 B Sep 18, 2023
- GIS DataBase
- IISExpress
- My Music
- My Pictures
- My Videos
- My Web Sites
- n

RStudio interface showing the console output of the R code and the environment pane displaying the resulting ANOVA results.

```

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
R Studio Go to file/function Addins
Source 21:1 (Top Level) R Script
Console
30°C Sunny Search
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
R Studio Go to file/function Addins
Source
Console Terminal Background Jobs
R - R 4.1.2 . ~/ ...
> print("Name: S126 Hariprasad")
[1] "Name: S126 Hariprasad"
> # 1. Select the 'Most Runs - 2020.csv' file manually
> data <- read.csv(file.choose())
> # 2. Prepare the data
> # Convert '100' and '50' columns into Factors (categories) for ANOVA
> # This allows us to see if having a 100 or a 50 significantly impacts total Runs
> data$Has_100 <- as.factor(ifelse(data$X100 > 0, "Yes", "No"))
> data$Has_50 <- as.factor(ifelse(data$X50 > 0, "Yes", "No"))
> # 3. Perform Two-Way ANOVA
> # Aim: Test if total 'Runs' are affected by scoring a Century and/or a Half-century
> aov_result <- aov(Runs ~ Has_100 * Has_50, data = data)
> # 4. View the ANOVA table results
> summary(aov_result)
   Df Sum Sq Mean Sq F value    Pr(>F)
Has_100     1  534748  534748  68.03 1.55e-13 ***
Has_50      1 2137597 2137597 271.92  < 2e-16 ***
Residuals 130 1021936   7861
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
> # 5. Preview the processed data
> head(data[, c("Player", "Runs", "Has_100", "Has_50")])
   Player Runs Has_100 Has_50
1  KL Rahul  670   Yes   Yes
2 Shikhar Dhawan  618   Yes   Yes
3 David Warner  548   No    Yes
4 Shreyas Iyer  519   No    Yes
5 Ishan Kishan  516   No    Yes
6 Quinton de Kock 503   No    Yes
>

```

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