

SHETH L.U.J. AND SIR M.V. COLLEGE

PRACTICAL NO 7

7:Performing one-way ANOVA using aov() (R).

The screenshot shows the RStudio interface with the following details:

- Console:** Displays the R session code for performing a one-way ANOVA on the 'StudentsPerformance' dataset.
- Environment:** Shows the global environment with objects like 'anova_result', 'data', and 'StudentsPerformance'.
- Data:** Shows the 'StudentsPerformance' dataset with 1000 rows and 8 variables.
- File Explorer:** Shows various CSV files in the current directory, including 'employee_salary_dataset.csv', 'exams.csv', 'flipkart_com-e-commerce_sample.csv', 'random_stock_market_dataset.csv', 'student_performance_analysis.csv', 'superstore.csv', and 'StudentsPerformance'.
- Taskbar:** Shows system icons for battery, signal, and date/time (25-12-2025, 21:41).
- Status Bar:** Shows 'Activate Windows' and 'Go to Settings to activate Windows.'

PRACTICAL NO 8

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

The screenshot shows the RStudio interface with the following details:

- Console:** Displays the R session code for performing a two-way ANOVA on the 'insurance' dataset.
- Environment:** Shows the global environment with objects like 'anova_result', 'data', and 'insurance'.
- Data:** Shows the 'insurance' dataset with 1338 rows and 7 variables.
- File Explorer:** Shows various CSV files in the current directory, including 'employee_salary_dataset.csv', 'exams.csv', 'flipkart_com-e-commerce_sample.csv', 'insurance.csv', 'random_stock_market_dataset.csv', 'student_performance_analysis.csv', 'superstore.csv', and 'StudentsPerformance'.
- Taskbar:** Shows system icons for battery, signal, and date/time (25-12-2025, 22:00).
- Status Bar:** Shows 'Activate Windows' and 'Go to Settings to activate Windows.'

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PRACTICAL NO 9

9 Conducting Chi-square tests using chisq.test() (R).

The screenshot shows the RStudio interface with the following details:

- Console:** Displays R code for reading a CSV file and performing a Chi-square test. The code includes comments explaining the steps.
- Data View:** Shows a table named "table_data" with 13 columns and 240 rows, containing integer values from 0 to 1.
- Environment View:** Lists various objects: anova_result, categoricaldataset, chisq_result, data, insurance, StudentsPerformance, and table_data.
- File Explorer:** Shows a folder structure with files like CategoricalDataset.csv, exams.csv, hipkart_com-e-commerce_sample.csv, insurance.csv, random_stock_market_dataset.csv, student_performance_analysis.csv, StudentsPerformance.csv, and superstore.csv.
- Bottom Status Bar:** Includes icons for trending videos, search, and system status (ENG IN, 25-12-2025).

Activate Windows
Go to Settings to activate Windows.

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
S090_M2_PRACTICAL.R S090_M2_PRACTICAL.R CategoricalDataset.R
R Script Data Environment History Connections Tutorial
Project: (None)
1 wrkr_name("Name: S090_MADESH")
111 [Top Level] 2
Console Terminal Background Jobs
R > R4.52.2 ->
> pr(<-name: S090_MADESH")
[1] "Name: S090_MADESH"
> data <- read.csv("C:/CategoricalDataset.csv")
Rows: 240 Columns: 240
  Column specification:
$> delimitr::specification()
$> delimitr::delim()
#> dbl(240): Team_1_Afghanistan, Team_1_Australia, Team_1_Bangladesh, Team_1_Bermuda, Team_1_Canada, Team_1_East_Africa...
#> use("spec") to retrieve the full column specification for this data.
#> i specify the column types or set 'show_col_types = FALSE' to quiet this message.
> table_data <- table(data$Team_1_India, data$Team_2_Pakistan)
> chisq_result <- chisq.test(table_data)
> chisq_result
Pearson's Chi-squared test with Yates' continuity correction

data: table_data
X-squared = 6.2942, df = 1, p-value = 0.01211

> head(data)
#> #> nrow(data) / 6 = 240
#> #> Team_1_Afghanistan` `Team_1_Australia` `Team_1_Bangladesh` `Team_1_Bermuda` `Team_1_Canada` `Team_1_East_Africa` ...
#> #>   `<dbl>`   `<dbl>`   `<dbl>`   `<dbl>`   `<dbl>`   `<dbl>` 
1  0       1       0       0       0       0
2  0       0       0       0       0       0
3  0       0       0       0       0       0
4  0       0       0       0       0       0
5  0       0       0       0       0       0
6  0       0       0       0       0       0
#> #> 234 more variables: `Team_1_England` <dbl>, `Team_1_Hong_Kong` <dbl>, `Team_1_India` <dbl>, `Team_1_Ireland` <dbl>,
#> #> `Team_1_Kenya` <dbl>, `Team_1_Namibia` <dbl>, `Team_1_Netherlands` <dbl>, `Team_1_New_Zealand` <dbl>,
#> #> `Team_1_Pakistan` <dbl>, `Team_1_Peru` <dbl>, `Team_1_Singapore` <dbl>, `Team_1_South_Africa` <dbl>,
#> #> `Team_1_Sri_Lanka` <dbl>, `Team_1_U_A_E` <dbl>, `Team_1_U_S_A` <dbl>, `Team_1_Uk_Bodies` <dbl>,
#> #> `Team_1_Zimbabwe` <dbl>, `Team_2_Afghanistan` <dbl>, `Team_2_Australia` <dbl>, `Team_2_Bangladesh` <dbl>,
#> #> `Team_2_Bermuda` <dbl>, `Team_2_Canada` <dbl>, `Team_2_East_Africa` <dbl>, `Team_2_England` <dbl>,
#> #> `Team_2_Fiji` <dbl>, `Team_2_Greece` <dbl>, `Team_2_Ireland` <dbl>, `Team_2_Kenya` <dbl>,
#> #> i use "colnames()" to see all variable names
> |
```