

**SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE
SUBJECT : R-PROGRAMMING**

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

OUTPUT

The screenshot shows the RStudio interface with the following details:

- File Menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Addins:** Go to file/function, Addins dropdown.
- Source:** Console tab selected, showing R code and output. The code reads a CSV file, converts the season column to a factor, performs a one-way ANOVA, and prints the summary results. It then checks the p-value and prints a conclusion based on the result.
- Environment:** Shows objects in the global environment: anova_r... (List of 13), fruits (39 obs. of 12 vari...), and values (p_value: 1.22690942997006e-06).
- Plots:** Files, Plots, Packages, Help, Viewer tabs.
- Files:** Home, .RData, .Rhistory, Custom Office Templates, Dell, desktop.ini, My Music, My Videos, NetBeansProjects, Shortcut to Documents (OneDrive - Pt 1.7 Ki), fruits_dataset.csv.
- System:** Shows weather (31°C, Sunny), search bar, taskbar with icons for File Explorer, Search, Task View, File History, Google Chrome, Microsoft Edge, and RStudio.

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- File menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Addins:** Go to file/function, Addins dropdown.
- Environment pane:** Shows the structure of the 'fruits' data frame:

Name	Type	Value
anova_result	list [13] (S3: aov, lm)	List of length 13
coefficients	double [5]	200 -134 -160 -148 -154
residuals	double [39]	-111.00 -8.00 -13.67 -8.67 10.61 1.00 ...
effects	double [39]	-455.40 -24.82 51.38 179.03 243.50 9.09 ...
rank	integer [1]	5
fitted.values	double [39]	200.0 40.0 65.7 65.7 52.4 46.0 ...
assign	integer [5]	0 1 1 1 1
qr	list [5] (S3: qr)	List of length 5
df.residual	integer [1]	34
contrasts	list [1]	List of length 1
xlevels	list [1]	List of length 1
call	language	aoe(formula = calories ~ season, data = fruits)
terms	formula	calories ~ season
model	list [39 x 2] (S3: data.frame)	A data.frame with 39 rows and 2 columns
- Console pane:** Shows the R session history:

```
R > R 4.5.2 -/-
> fruits <- read.csv("fruits_dataset.csv")
>
> fruits$season <- as.factor(fruits$season)
<
```
- Project pane:** Project: (None) with Environment, History, Connections, and Viewer tabs.
- Bottom status bar:** Shows battery level (31%), weather (Sunny), network, and system information (ENG, 100%, 22:12).

