

**Laxmi Charitable Trust's**  
**Sheth L.U.J College of Arts & Sir M.V. College of Science and**  
**Commerce Department of Information Technology**  
**(B.Sc.I.TSemester IV)**

Data Analysis with SAS/SPSS/R

**Practical – VIII**

Roll No.: S033	Name: Prajapati raj
Class: SYIT	Batch: 2
Date of Assignment: 17-01-2026	Date/Time of Submission:17-01-2026

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

**CODE:-**

**# Create data**

```
score <- c(75, 78, 80, 82,  
          70, 72, 74, 76,  
          85, 88, 90, 92,  
          80, 82, 84, 86)
```

```
method <- factor(rep(c("Online", "Offline"), each = 8))  
gender <- factor(rep(c("Male", "Female"), times = 8))
```

```
data <- data.frame(score, method, gender)
```

**# Two-way ANOVA with interaction**

```
anova_result <- aov(score ~ method * gender, data = data)
```

**# Display results**

```
summary(anova_result)
```

**OUTPUT:-**

```
> # Create data  
> score <- c(75, 78, 80, 82,  
+           70, 72, 74, 76,  
+           85, 88, 90, 92,  
+           80, 82, 84, 86)  
>  
> method <- factor(rep(c("Online", "Offline"), each = 8))  
> gender <- factor(rep(c("Male", "Female"), times = 8))  
>  
> data <- data.frame(score, method, gender)  
>  
> anova_result <- aov(score ~ method * gender, data = data)  
> summary(anova_result)  
              Df Sum Sq Mean Sq F value    Pr(>F)        
method         1   400.0    400.0   23.358 0.00041 ***  
gender          1    20.2     20.2    1.182 0.29821     
method:gender   1     0.0      0.0    0.000 1.00000     
Residuals     12   205.5     17.1                
---  
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
> |
```