

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

SUBJECT NAME: data analysis

PRACTICAL 8

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

```
R - R432 - ~/
> library(readr)
> library(dplyr)
> df <- read_csv("~/S086 R Prac 7 to 9/Al_Impact_on_Jobs_2030.csv")
> df <- df %>%
+   filter(!is.na(Average_Salary), !is.na(Education_Level), !is.na(Risk_Category))
> model <- aov(Average_Salary ~ Education_Level * Risk_Category, data = df)
> summary(model)
            Df Sum Sq Mean Sq F value Pr(>F)
Education_Level 3 3.855e+09 1.285e+09  1.076 0.3581
Risk_Category   2 4.985e+09 2.493e+09  2.086 0.1243
Education_Level:Risk_Category  6 1.304e+10 2.173e+09  1.819 0.0915
Residuals      2968 3.570e+10 1.199e+09
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

> aggregate(Average_Salary ~ Education_Level * Risk_Category, data = df, FUN = mean)
  Education_Level Risk_Category Average_Salary
1 Bachelor's      High      87616.68
2 High School     High      83841.44
3 Master's        High      90989.23
4 PhD            High      86347.62
5 Bachelor's      Low       87420.59
6 High School     Low       93598.39
7 Master's        Low       90892.61
8 PhD            Low       84701.76
9 Bachelor's      Medium    90082.70
10 High School    Medium    88154.10
11 Master's       Medium    91714.09
12 PhD           Medium    92236.91
>
```

Environment

Object	Class	Attributes
model	lm	list of 13
ss_between_df	data.frame	4 obs. of 4 variables
test_result	data.frame	list of 9

Values

Object	Value
contingency_table	'table' int [1,2] 752 779 748 721
df_between	3
df_within	2968
f_stat	1.0730414550076
grand_mean	89372.279
k	4L
median_exposure	0.5
median_salary	89318

Files

Roxygen Quick Reference

Roxygen2 is an R package that allows you to write in-source documentation for your package functions and objects.

Write documentation above your package functions with the `#'` comment prefix.

Documenting Functions

Example

```
#' This is the title.
#'
#' This is the description.
#'
#' These are further details.
#'
#' @section A Custom Section:
#'   Text accompanying the custom section.
#'
#' @param x A description of the parameter 'x'. The
#'   description can span multiple lines.
#' @param y A description of the parameter 'y'.
#' @returns The sum of 'x' and 'y'.
#' @export
#'
#' Roxygen test
```

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