

SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

SUBJECT : Data Analysis with SAS / SPSS / R

AIM : Performing paired t-tests using t.test(paired=TRUE) (R).

OUTPUT

The screenshot displays the RStudio interface. The top-left pane shows the R console with the following code and output:

```
> print("---- 6. Paired t-test ----")
[1] "---- 6. Paired t-test ----"
>
> df <- read.csv("Winter_Fashion_Trends_Dataset.csv")
> # 1. Create simulated paired data
> df$Discounted_Price <- df$Price - runif(nrow(df), min = 5, max = 20)
> # 2. Perform paired t-test
> t_test_paired <- t.test(df$Price,
+                         df$Discounted_Price,
+                         paired = TRUE)
> print(t_test_paired)
```

The output shows the results of a paired t-test:

```
Paired t-test
data: df$Price and df$Discounted_Price
t = 39.503, df = 149, p-value < 2.2e-16
alternative hypothesis: true mean difference is not equal to 0
95 percent confidence interval:
 12.28630 13.58018
sample estimates:
mean difference
 12.93324
```

The bottom-left pane displays a data table with 19 columns: ID, Brand, Category, Color, Material, Style, Gender, Season, Price.USD., Popularity_Score, Customer_Rating, and Trend_Score. The table contains 19 rows of data, showing various clothing items and their attributes.

The right-hand pane shows the Environment window with the following data objects:

- df: 150 obs. of 13 var...
- t_test_paired: List of 10

The Files window on the right shows the project files, including the dataset file: Winter_Fashion_Trends_Dataset.csv.

SHUBHAM RAORANE S108

SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

SUBJECT : Data Analysis with SAS / SPSS /R

The screenshot displays the RStudio environment with a project named 'S108-R-PROGRAM PRAC6 M-2.R'. The main window shows the results of a t-test for the variable 't_test_paired'. The results are organized into a table with columns for Name, Type, and Value.

Name	Type	Value
t_test_paired	list [10] (S3: htest)	List of length 10
statistic	double [1]	39.50342
parameter	double [1]	149
p.value	double [1]	7.715959e-81
conf.int	double [2]	12.3 13.6
estimate	double [1]	12.93324
null.value	double [1]	0
stderr	double [1]	0.3273954
alternative	character [1]	'two.sided'
method	character [1]	'Paired t-test'
data.name	character [1]	'df\$Price and df\$Discounted_Price'

The right-hand pane shows the Environment tab with a list of objects: 'df' (150 obs. of 13 var...) and 't_test_...' (List of 10). The Files tab shows a directory structure with various files and folders, including '.RData', '.Rhistory', 'Custom Office Templates', 'Dell', 'desktop.ini', 'My Music', 'My Videos', 'NetBeansProjects', 'Shortcut to Documents (OneDrive - P...', and 'Winter_Fashion_Trends_Dataset.csv'.

