

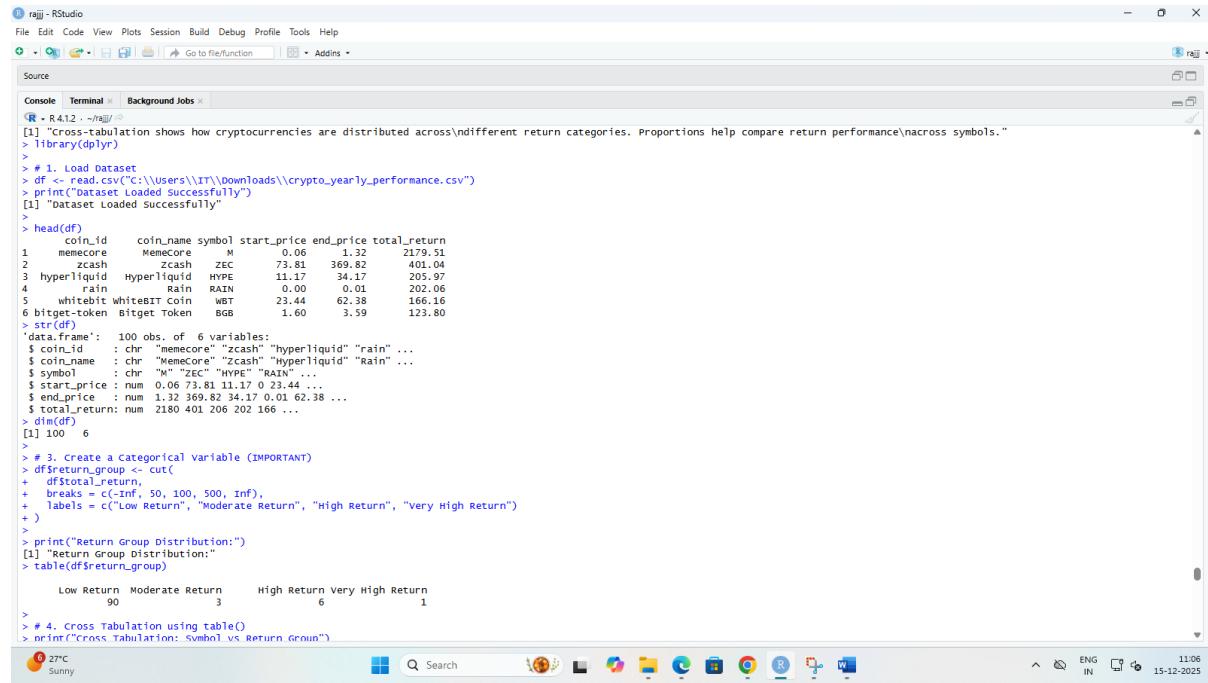
SHETH L.U.J AND SIR M.V. COLLEGE

SUBJECT :- DATA ANALYSIS WITH SAS/SPSS/R

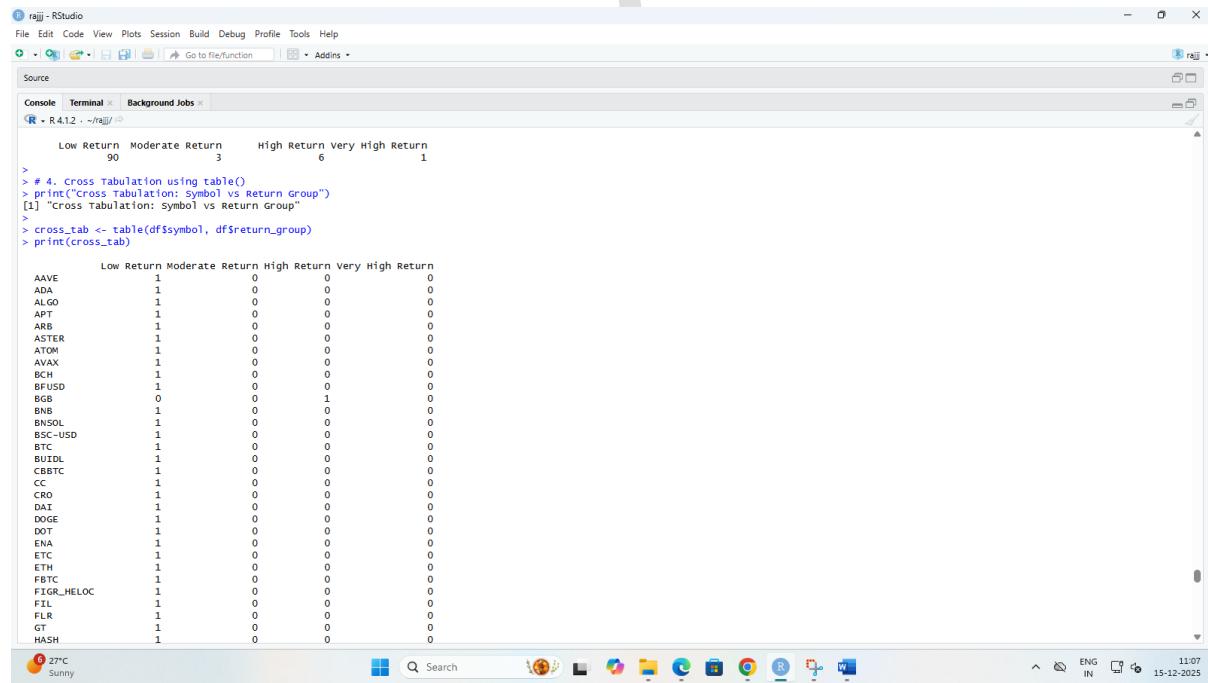
MODULE 2 - PRACTICAL – 3

AIM:- Performing one-sample t-tests using t.test() (R)

OUTPUT:-



```
R - raji - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins *
Source
Console Terminal Background Jobs
R - R 4.1.2 - ~/r/raj/
[1] "Cross-tabulation shows how cryptocurrencies are distributed across\ndifferent return categories. Proportions help compare return performance\nacross symbols."
> library(dplyr)
>
> # 1. Load dataset
> df <- read.csv("C:\\Users\\LT\\Downloads\\crypto_yearly_performance.csv")
> print("dataset Loaded Successfully")
[1] "dataset Loaded Successfully"
> head(df)
#> #> #> #> #> #>
  coin_id coin_name symbol start_price end_price total_return
1 memecore Memecore M 0.06 1.32 2179.51
2 zcash Zcash ZEC 73.81 369.82 401.04
3 hyperliquid Hyperliquid HYPE 11.17 34.17 205.97
4 rain Rain RAIN 0.00 0.01 202.06
5 whitebit WhiteBIT coin WBT 23.44 62.38 166.16
6 bitget-token Bitget Token BGB 1.60 3.59 123.80
> str(df)
'data.frame': 100 obs. of 6 variables:
 $ coin_id : chr "memecore" "zcash" "hyperliquid" "rain" ...
 $ coin_name: chr "Memecore" "Zcash" "Hyperliquid" "Rain" ...
 $ symbol   : chr "M" "ZEC" "HYPE" "RAIN" ...
 $ start_price: num 0.06 73.81 11.17 0 23.44 ...
 $ end_price : num 1.32 369.82 34.17 0.01 62.38 ...
 $ total_return: num 2180 401 206 202 166 ...
> dim(df)
[1] 100 6
>
> # 3. Create a Categorical variable (IMPORTANT)
> df$return_group <- cut(
+   df$total_return,
+   breaks = c(-Inf, 50, 100, 500, Inf),
+   labels = c("Low Return", "Moderate Return", "High Return", "Very High Return")
+ )
>
> print("Return Group Distribution:")
[1] "Return Group Distribution:"
> table(df$return_group)
  Low Return Moderate Return High Return Very High Return
    90            3             6              1
>
> # 4. Cross Tabulation using table()
> print("Cross Tabulation: Symbol vs Return Group")
  
```



```
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Source
Console Terminal Background Jobs
R - R 4.1.2 - ~/r/raj/
  Low Return Moderate Return High Return Very High Return
    90            3             6              1
>
> # 4. Cross Tabulation using table()
> print("Cross Tabulation: Symbol vs Return Group")
[1] "Cross Tabulation: Symbol vs Return Group"
>
> cross_tab <- table(df$symbol, df$return_group)
> print(cross_tab)
  Low Return Moderate Return High Return Very High Return
  AAVE 1 0 0 0
  ADA 1 0 0 0
  ALGO 1 0 0 0
  APT 1 0 0 0
  ARB 1 0 0 0
  ASTER 1 0 0 0
  ATOM 1 0 0 0
  AVAX 1 0 0 0
  BCH 1 0 0 0
  BFUSD 1 0 0 0
  BGB 0 0 1 0
  BME 1 0 0 0
  BNGL 1 0 0 0
  BSC-USD 1 0 0 0
  BTC 1 0 0 0
  BUIDL 1 0 0 0
  CBBTC 1 0 0 0
  CC 1 0 0 0
  CRO 1 0 0 0
  DAT 1 0 0 0
  DOGE 1 0 0 0
  DOT 1 0 0 0
  ENA 1 0 0 0
  ETC 1 0 0 0
  ETH 1 0 0 0
  FBTC 1 0 0 0
  FIGF-HELOC 1 0 0 0
  FFI 1 0 0 0
  FLR 1 0 0 0
  GT 1 0 0 0
  HASH 1 0 0 0
  
```

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```
R 4.1.2 . ~/r/raj/ 
XMR      0      0      1      0
XRP      1      0      0      0
ZEC      0      0      1      0
> 
> # 5. Row-wise Proportions
> print("Row-wise Proportions:")
[1] "Row-wise Proportions:"
> prop.table(cross_tab, margin = 1)

Low Return Moderate Return High Return Very High Return
AAVE     1      0      0      0      0
ADA      1      0      0      0      0
ALGO     1      0      0      0      0
APT      1      0      0      0      0
ARB      1      0      0      0      0
ASTER    1      0      0      0      0
ATOM    1      0      0      0      0
AVAX    1      0      0      0      0
BCH     1      0      0      0      0
BUSD    1      0      0      0      0
BGB     0      0      1      0      0
BNB     1      0      0      0      0
BNSOL   1      0      0      0      0
BSC-USD 1      0      0      0      0
BTC     1      0      0      0      0
BUTDOL  1      0      0      0      0
CBBTC   1      0      0      0      0
CC      1      0      0      0      0
CRO     1      0      0      0      0
DAI     1      0      0      0      0
DAGE    1      0      0      0      0
DOT     1      0      0      0      0
ENA     1      0      0      0      0
ETC     1      0      0      0      0
ETH     1      0      0      0      0
FBTC   1      0      0      0      0
FIGR_HELOC 1      0      0      0      0
FTL     1      0      0      0      0
FTR     1      0      0      0      0
GT      1      0      0      0      0
HASH    1      0      0      0      0
HBAR    1      0      0      0      0
HTX     1      0      0      0      0
```

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```
R 4.1.2 . ~/r/raj/ 
ZEC
> 
> # 6. Column-wise Proportions
> print("Column-wise Proportions:")
[1] "Column-wise Proportions:"
> prop.table(cross_tab, margin = 2)

Low Return Moderate Return High Return Very High Return
AAVE  0.01111111  0.00000000  0.00000000  0.00000000
ADA   0.01111111  0.00000000  0.00000000  0.00000000
ALGO  0.01111111  0.00000000  0.00000000  0.00000000
APT   0.01111111  0.00000000  0.00000000  0.00000000
ARB   0.01111111  0.00000000  0.00000000  0.00000000
ASTER 0.01111111  0.00000000  0.00000000  0.00000000
ATOM  0.01111111  0.00000000  0.00000000  0.00000000
AVAX  0.01111111  0.00000000  0.00000000  0.00000000
BCH   0.01111111  0.00000000  0.00000000  0.00000000
BUSD  0.01111111  0.00000000  0.00000000  0.00000000
BGB   0.00000000  0.00000000  0.16666667  0.00000000
BNB   0.01111111  0.00000000  0.00000000  0.00000000
BNSOL 0.01111111  0.00000000  0.00000000  0.00000000
BSC-USD 0.01111111  0.00000000  0.00000000  0.00000000
BTC   0.01111111  0.00000000  0.00000000  0.00000000
BUTDOL 0.01111111  0.00000000  0.00000000  0.00000000
CBBTC 0.01111111  0.00000000  0.00000000  0.00000000
CC    0.01111111  0.00000000  0.00000000  0.00000000
CRO   0.01111111  0.00000000  0.00000000  0.00000000
DAI   0.01111111  0.00000000  0.00000000  0.00000000
DAGE  0.01111111  0.00000000  0.00000000  0.00000000
DOT   0.01111111  0.00000000  0.00000000  0.00000000
ENA   0.01111111  0.00000000  0.00000000  0.00000000
ETC   0.01111111  0.00000000  0.00000000  0.00000000
ETH   0.01111111  0.00000000  0.00000000  0.00000000
FBTC  0.01111111  0.00000000  0.00000000  0.00000000
FIGR_HELOC 0.01111111  0.00000000  0.00000000  0.00000000
FTL   0.01111111  0.00000000  0.00000000  0.00000000
FTR   0.01111111  0.00000000  0.00000000  0.00000000
GT    0.01111111  0.00000000  0.00000000  0.00000000
HASH  0.01111111  0.00000000  0.00000000  0.00000000
HBAR  0.01111111  0.00000000  0.00000000  0.00000000
HTX   0.01111111  0.00000000  0.00000000  0.00000000
HYPE  0.00000000  0.00000000  0.16666667  0.00000000
ICP   0.01111111  0.00000000  0.00000000  0.00000000
```

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```
raji - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Background Jobs ×
R 4.1.2 - /naij/
> RLUSD Low Return 1
58 RSETH Low Return 1
59 SHIB Low Return 1
60 SKY Low Return 1
61 SOL Low Return 2
62 STETH Low Return 1
63 SUI Low Return 1
64 SUSDE Low Return 1
65 USDR Low Return 1
66 SYRUPUSDC Low Return 1
67 SYRUPUSDT Low Return 1
68 TAO Low Return 1
69 TON Low Return 1
70 TRUMP Low Return 1
71 TRX Low Return 1
72 UNI Low Return 1
73 USD1 Low Return 1
74 USDC Low Return 2
75 USDE Low Return 1
76 USDF Low Return 1
77 USDG Low Return 1
78 USDO Low Return 1
79 USDT Low Return 1
80 USDO1 Low Return 1
81 USDTB Low Return 1
82 USYC Low Return 1
83 VET Low Return 1
84 WBETH Low Return 1
85 WBTC Low Return 1
86 WBT High Return 1
87 WBTC Low Return 1
88 WEETH Low Return 1
89 WETH Low Return 2
90 WLD Low Return 1
91 WLFT Low Return 1
92 WSTTH Low Return 1
93 XAUT Moderate Return 1
94 XLM Low Return 1
95 XMR High Return 1
96 XRP Low Return 1
97 ZEC High Return 1
> library(dplyr)
```