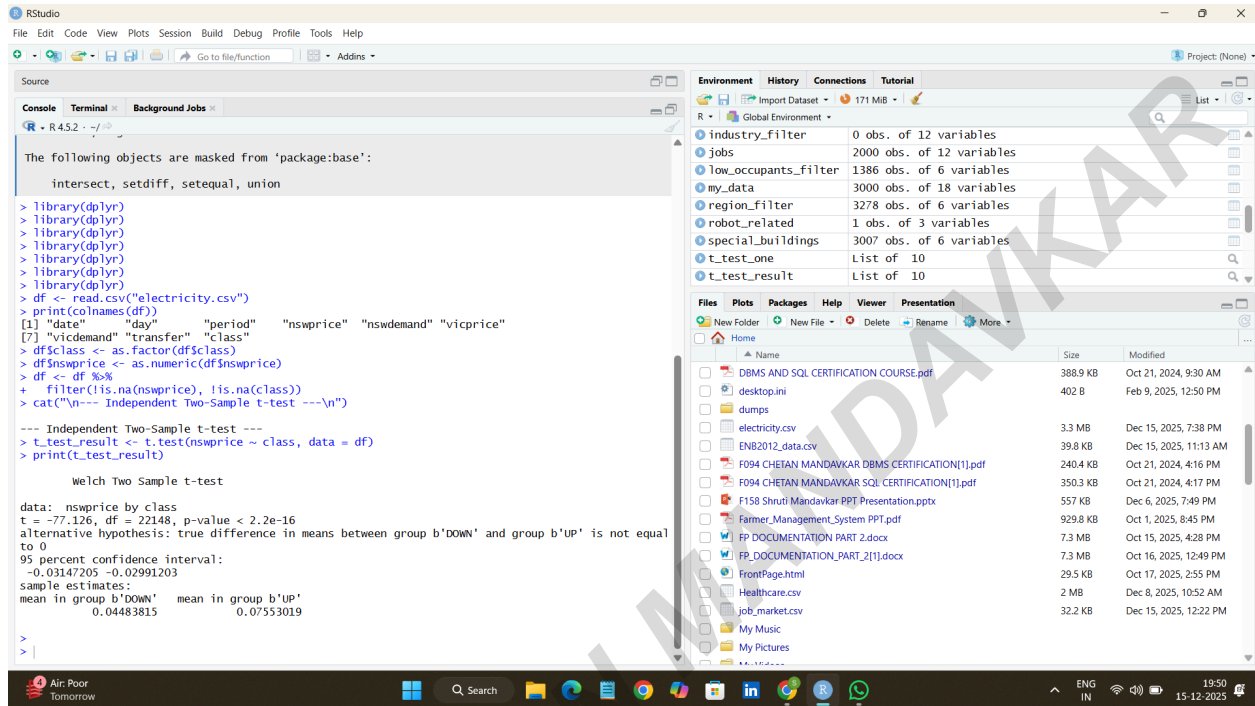


SHETH L.U.J. AND SIR M.V. COLLEGE

Aim:- Performing independent two-sample t-tests using `t.test()` with grouping (R).



The screenshot displays the RStudio interface. The console shows the execution of R code to perform an independent two-sample t-test. The code includes loading the `dplyr` package, reading a CSV file named `electricity.csv`, and performing the t-test using `t.test()`. The output in the console indicates that the null hypothesis is not rejected, as the p-value is greater than 0.05.

```
R - R4.5.2 - /.../
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins

Source
Console Terminal Background Jobs

The following objects are masked from 'package:base':
intersect, setdiff, setequal, union

> library(dplyr)
> library(dplyr)
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> library(dplyr)
> library(dplyr)
> library(dplyr)
> library(dplyr)
> df <- read.csv("electricity.csv")
> print(colnames(df))
[1] "date" "day" "period" "nswprice" "nswdemand" "vicprice"
[7] "vicedemand" "transfer" "class"
> df$class <- as.factor(df$class)
> df$nswprice <- as.numeric(df$nswprice)
> df <- df %>%
+ filter(!is.na(nswprice), !is.na(class))
> cat("\n--- Independent Two-Sample t-test ---\n")

--- Independent Two-Sample t-test ---
> t_test_result <- t.test(nswprice ~ class, data = df)
> print(t_test_result)

Welch Two Sample t-test

data: nswprice by class
t = -77.126, df = 22148, p-value < 2.2e-16
alternative hypothesis: true difference in means between group b'DOWN' and group b'UP' is not equal to 0
95 percent confidence interval:
-0.03147205 -0.02991203
sample estimates:
mean in group b'DOWN' mean in group b'UP'
0.04483815 0.07553019

>
> |
```

The Environment pane on the right shows the loaded data and objects:

Object	Details
industry_filter	0 obs. of 12 variables
jobs	2000 obs. of 12 variables
low_occupants_filter	1386 obs. of 6 variables
my_data	3000 obs. of 18 variables
region_filter	3278 obs. of 6 variables
robot_related	1 obs. of 3 variables
special_buildings	3007 obs. of 6 variables
t_test_one	List of 10
t_test_result	List of 10

The Files pane on the right shows the file explorer with various files and folders, including `DBMS AND SQL CERTIFICATION COURSE.pdf`, `desktop.ini`, `dumps`, `electricity.csv`, `ENR2012_data.csv`, `F094 CHETAN MANDAVKAR DBMS CERTIFICATION[1].pdf`, `F094 CHETAN MANDAVKAR SQL CERTIFICATION[1].pdf`, `F158 Shruti Mandavkar PPT Presentation.pptx`, `Farmer_Management_System PPT.pdf`, `FP DOCUMENTATION PART 2.docx`, `FP DOCUMENTATION PART 2[1].docx`, `FrontPage.html`, `Healthcare.csv`, `job_market.csv`, `My Music`, and `My Pictures`.

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SUBJECT:- Data Analysis With SAS / SPSS / R