

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

SUBJECT : Data Analysis with SAS / SPSS / R

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

OUTPUT

The screenshot displays the RStudio interface with the following components:

- Console:** Shows the execution of R code for a two-sample t-test. The output indicates a Welch Two Sample t-test with a p-value less than 2.2e-16, suggesting a significant difference between the groups.
- Environment:** Lists the objects in the global environment, including 'df' (1587 observations) and 't_test_...' (List of 10).
- Data Viewer:** Displays a data frame with 1587 observations and 14 variables. The first few rows are visible, showing repository details.

Console Output:

```
R - R 4.5.2 ~ / >
> print("---- 5. Independent Two-Sample t-test ----")
[1] "---- 5. Independent Two-Sample t-test ----"
>
> df <- read.csv("github_trending_repos.csv")
> df$Star_Group <- ifelse(df$stars >= median(df$stars, na.rm = TRUE),
+                           "High_Stars",
+                           "Low_Stars")
> t_test_two <- t.test(forks ~ Star_Group, data = df)
> print(t_test_two)

Welch Two Sample t-test

data: forks by Star_Group
t = 10.464, df = 1574.7, p-value < 2.2e-16
alternative hypothesis: true difference in means between group High_Stars and group Low_Stars is not equal to 0
95 percent confidence interval:
 3244.908 4742.108
sample estimates:
mean in group High_Stars mean in group Low_Stars
      5074.151           1080.643

> |
```

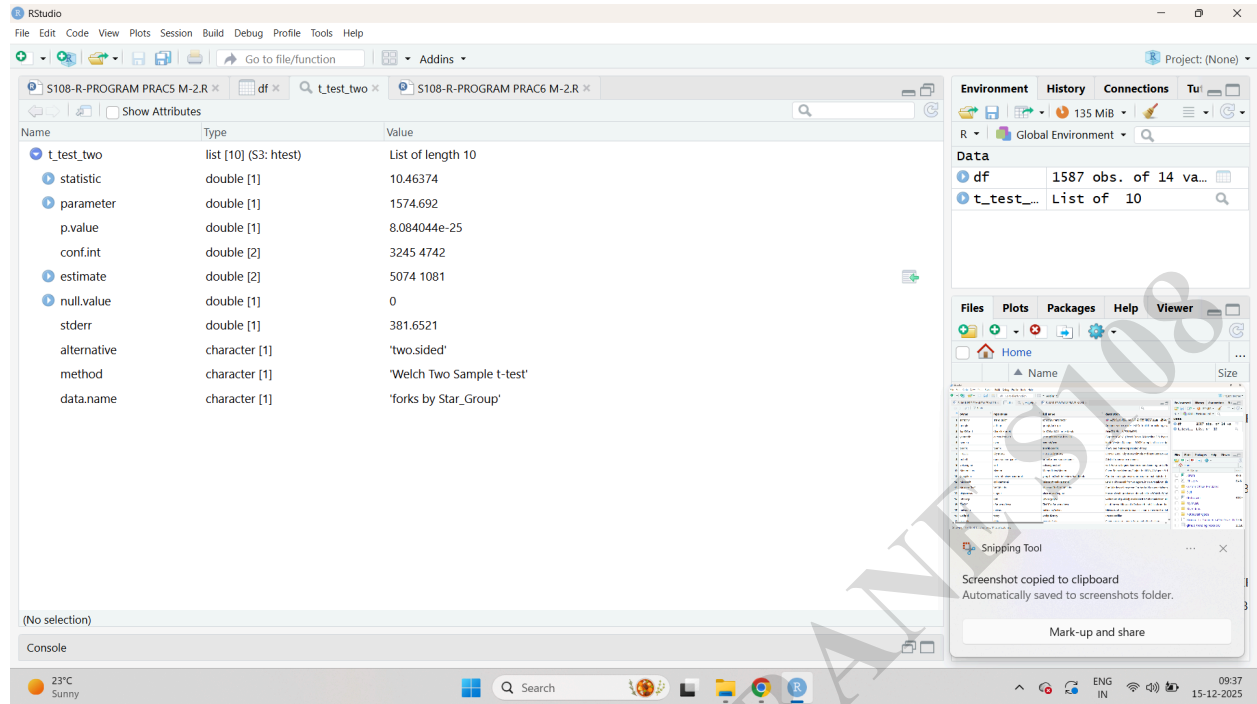
Data Viewer Table:

owner	repo_name	full_name	description
1 sansan0	TrendRadar	sansan0/TrendRadar	告别信息过载, AI 助你看遍新闻资讯热点, 简单的
2 google	adk-go	google/adk-go	An open-source, code-first Go toolkit for building, evi
3 TapXWorld	ChinaTextbook	TapXWorld/ChinaTextbook	所有小初高、大学PDF教材。
4 yeongpin	cursor-free-vip	yeongpin/cursor-free-vip	[Support 0.49.x] (Reset Cursor AI MachineID & Bypass
5 nvm-sh	nvm	nvm-sh/nvm	Node Version Manager - POSIX-compliant bash script
6 traefik	traefik	traefik/traefik	The Cloud Native Application Proxy
7 HKUDS	LightRAG	HKUDS/LightRAG	[EMNLP2025] "LightRAG: Simple and Fast Retrieval-Au
8 bobeff	open-source-games	bobeff/open-source-games	A list of open source games.
9 volcengine	verl	volcengine/verl	verl: Volcano Engine Reinforcement Learning for LLMs
10 MemoriLabs	Memori	MemoriLabs/Memori	Open-Source Memory Engine for LLMs, AI Agents & t
11 yangshun	tech-interview-handbook	yangshun/tech-interview-handbook	Curated coding interview preparation materials for bu
12 microsoft	call-center-ai	microsoft/call-center-ai	Send a phone call from AI agent, in an API call. Or, dir
13 MustardChef	WSABuilds	MustardChef/WSABuilds	Run Windows Subsystem For Android on your Windo
14 playcanvas	engine	playcanvas/engine	Powerful web graphics runtime built on WebGL, WebG
15 iptv-org	iptv	iptv-org/iptv	Collection of publicly available IPTV channels from all
16 Zie619	n8n-workflows	Zie619/n8n-workflows	all of the workflows of n8n i could find (also from the
17 milvus-io	milvus	milvus-io/milvus	Milvus is a high-performance, cloud-native vector dat
18 wolfpld	tracy	wolfpld/tracy	Frame profiler
19	Open source AI agents for conversation toolkits

Showing 1 to 19 of 1,587 entries, 14 total columns

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The screenshot displays the RStudio environment. The main window shows a table of t-test results for a variable named 't_test_two'. The table includes columns for Name, Type, and Value. The Environment pane on the right shows the Global Environment with variables 'df' (1587 obs. of 14 va...) and 't_test_...' (List of 10). A Snipping Tool window is open, displaying a message: 'Screenshot copied to clipboard. Automatically saved to screenshots folder. Mark-up and share'.

Name	Type	Value
t_test_two	list [10] (S3: htest)	List of length 10
statistic	double [1]	10.46374
parameter	double [1]	1574.692
p.value	double [1]	8.084044e-25
conf.int	double [2]	3245 4742
estimate	double [2]	5074 1081
null.value	double [1]	0
std.err	double [1]	381.6521
alternative	character [1]	'two.sided'
method	character [1]	'Welch Two Sample t-test'
data.name	character [1]	'forks by Star_Group'

