

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

## SUBJECT : Data Analysis with SAS / SPSS /R

**AIM :** Selecting and dropping variables using select() in R. import dataset.

### OUTPUT

```

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source Terminal Background Jobs
Console Terminal Background Jobs
R - R 4.5.1 - ~/ ~
> library(dplyr)
> nba <- read.csv("final_data.csv")
> print(head(nba, 3))
#> #> #>
  GAME_ID TEAM_ID TEAM_NAME TEAM_ABBREVIATION TEAM_CITY HOME_TEAM    MIN FGM FGA FG_PCT FG3M FG3A
1 21200001 1610612764 Wizards      WAS Washington Cavaliers 240:00 32 90 0.356   8 32
2 21200001 1610612739 Cavaliers    CLE Cleveland Cavaliers 240:00 36 79 0.456   7 20
3 21200002 1610612748 Heat        MIA Miami Heat 240:00 43 79 0.544   8 16
#> FG3_PCT FTM FA FT_PCT OREB DREB REB AST STL BLK TO PF PTS PLUS_MINUS EFG_PCT  PIE COVID_FLAG RESULT
#> #> #>
1 0.25 12 20 0.600 18 21 39 26 11 10 12 19 84      -10 0.32 42.60 0 0
2 0.35 15 22 0.682 18 36 54 22 7 5 20 21 94      10 0.36 57.40 0 1
3 0.50 26 32 0.813 5 31 36 25 8 5 20 120      13 0.43 55.74 0 1
#> SEASON WIN_PCT
1 12 0
2 12 100
3 12 100
> selected_basic <- nba %>%
+   select(GAME_ID, TEAM_ID, TEAM_NAME, FGM, FGA)
> print(head(selected_basic, 3))
#> #> #>
  GAME_ID TEAM_ID TEAM_NAME FGM FGA
1 21200001 1610612764 Wizards 32 90
2 21200001 1610612739 Cavaliers 36 79
3 21200002 1610612748 Heat 43 79
> selected_range <- nba %>%
+   select(FGM:FT_PCT)
> print(head(selected_range, 3))
#> #> #>
  FGM FGA FG_PCT FG3M FG3A FG3_PCT FTM FTA FT_PCT
1 32 90 0.356 8 32 0.25 12 20 0.600
2 36 79 0.456 7 20 0.35 15 22 0.682
3 43 79 0.544 8 16 0.50 26 32 0.813
> selected_start_f <- nba %>%
+   select(starts_with("F"))
> print(head(selected_start_f, 3))
#> #> #>
  FGM FGA FG_PCT FG3M FG3A FG3_PCT FTM FTA FT_PCT
1 32 90 0.356 8 32 0.25 12 20 0.600
2 36 79 0.456 7 20 0.35 15 22 0.682
3 43 79 0.544 8 16 0.50 26 32 0.813
> dropped_team <- nba %>%
+   select(-TEAM_NAME)
> print(names(dropped_team))
[1] "GAME_ID"      "TEAM_ID"      "TEAM_ABBREVIATION" "TEAM_CITY"      "HOME_TEAM"
[6] "MIN"          "FGM"          "FG_PCT"          "FG3M"          "FG3A"
[11] "FG3A"         "FG3_PCT"       "FTM"            "FTA"           "FT_PCT"
[16] "OREB"         "DREB"         "REB"            "AST"           "STL"
[21] "BLK"          "TO"           "PF"             "PTS"           "PLUS_MINUS"
[26] "EFG_PCT"       "PIE"          "COVID_FLAG"     "RESULT"        "SEASON"
[31] "WIN_PCT"
> dropped_multiple <- nba %>%
+   select(-TEAM_NAME, -TEAM_ABBREVIATION, -HOME_TEAM)
> print(names(dropped_multiple))
[1] "GAME_ID"      "TEAM_ID"      "TEAM_CITY"      "MIN"          "FGM"          "FGA"          "FG_PCT"
[8] "FG3M"         "FG3A"         "FG3_PCT"       "FTM"          "FTA"          "FT_PCT"        "OREB"
[15] "DREB"         "REB"          "AST"           "STL"          "BLK"          "TO"           "PF"
[22] "PTS"          "PLUS_MINUS"  "EFG_PCT"       "PIE"          "COVID_FLAG"   "RESULT"        "SEASON"
[29] "WIN_PCT"
> dropped_range <- nba %>%
+   select(-(FGM:FT_PCT))
> print(names(dropped_range))
[1] "GAME_ID"      "TEAM_ID"      "TEAM_NAME"      "TEAM_ABBREVIATION" "TEAM_CITY"
[6] "HOME_TEAM"    "MIN"          "OREB"          "DREB"          "REB"
[11] "AST"          "STL"          "BLK"           "TO"           "PF"
[16] "PTS"          "PLUS_MINUS"  "EFG_PCT"       "PIE"          "COVID_FLAG"
[21] "RESULT"        "SEASON"      "WIN_PCT"

```

**SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE  
SUBJECT : Data Analysis with SAS / SPSS /R**

The screenshot displays two instances of the RStudio IDE running on a Windows operating system. Both instances show the same project structure and data analysis results.

**Top Window (Left):**

- Environment:** Shows objects like `dropped_m...`, `dropped_r...`, `dropped_t...`, `final`, `final_list`, and `merged_da...`.
- Data View:** Displays a table of NBA player statistics with columns: GAME\_ID, TEAM\_ID, TEAM\_NAME, FGM, and FGA.
- Console:** Shows R code for reading the CSV file and printing the head of the data frame.
- Taskbar:** Includes icons for File Explorer, Task View, Start, Search, Taskbar settings, and a battery icon showing 1.07%.
- System Tray:** Shows network status (ENG IN), signal strength, and a date/time stamp (01-12-2023).

**Bottom Window (Right):**

- Environment:** Shows objects like `.RData`, `.Rhistory`, `Custom Office Templates`, `GIS DataBase`, `IISExpress`, `My Web Sites`, `NetBeansProjects`, `Power BI Desktop`, `Virtual Machines`, `Visual Studio 2022`, and `final_data.csv`.
- Data View:** Displays a table of NBA player statistics with columns: GAME\_ID, TEAM\_ID, TEAM\_NAME, TEAM\_ABBREVIATION, TEAM\_CITY, HOME\_TEAM, MIN, FGM, FGA, FG\_PCT, FG3M, FG3A, FG3\_PCT, FTM, FTA, FT\_PCT, and RESULT.
- Console:** Shows R code for reading the CSV file and printing the head of the data frame.
- Taskbar:** Includes icons for File Explorer, Task View, Start, Search, Taskbar settings, and a battery icon showing 1.07%.
- System Tray:** Shows network status (ENG IN), signal strength, and a date/time stamp (01-12-2023).

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

## SUBJECT : Data Analysis with SAS / SPSS / R

**RStudio**

File Edit Code View Plots Session Build Debug Profile Tools Help

S108-R PROGRAM PRAC7.R selected\_basic selected\_range selected\_start\_f dropped\_multiple

	FGM	FGA	FG_PCT	FG3M	FG3A	FG3_PCT
1	32	90	0.356	8	32	0.250
2	36	79	0.456	7	20	0.350
3	43	79	0.544	8	16	0.500
4	39	75	0.520	6	13	0.462
5	38	77	0.494	3	13	0.231
6	40	85	0.471	5	15	0.333
7	33	91	0.363	6	17	0.353
8	37	78	0.474	5	11	0.455
9	33	88	0.375	4	18	0.222
10	30	85	0.353	7	25	0.280
11	39	79	0.494	10	27	0.370
12	35	79	0.443	6	16	0.375
13	34	84	0.405	6	17	0.353
14	33	79	0.418	2	9	0.222
15	35	80	0.438	4	17	0.235
16	38	80	0.475	6	20	0.300
17	32	85	0.376	11	22	0.500
18	38	89	0.427	6	14	0.429

Showing 1 to 18 of 31,340 entries, 6 total columns

Console Terminal Background Jobs

```
R - R 4.5.1 - ~/R
> library(dplyr)
> nba <- read.csv("final_data.csv")
> print(head(nba))
```

NIFTY +0.01% 11:23 01-12-2025

**RStudio**

File Edit Code View Plots Session Build Debug Profile Tools Help

S108-R PROGRAM PRAC7.R selected\_basic selected\_range selected\_start\_f dropped\_multiple

	GAME_ID	TEAM_ID	TEAM_CITY	MIN	FGM	FGA	FG_PCT	FG3M	FG3A	FG3_PCT	FTM	FTA	FT_PCT	OR
1	21200001	1610612764	Washington	240:00	32	90	0.356	8	32	0.250	12	20	0.600	
2	21200001	1610612739	Cleveland	240:00	36	79	0.456	7	20	0.350	15	22	0.682	
3	21200002	1610612748	Miami	240:00	43	79	0.544	8	16	0.500	26	32	0.813	
4	21200002	1610612738	Boston	240:00	39	75	0.520	6	13	0.462	23	28	0.821	
5	21200003	1610612747	Los Angeles	240:00	38	77	0.494	3	13	0.231	12	31	0.387	
6	21200003	1610612742	Dallas	240:00	40	85	0.471	5	15	0.333	14	18	0.778	
7	21200004	1610612761	Toronto	240:00	33	91	0.363	6	17	0.353	16	19	0.842	
8	21200004	1610612754	Indiana	240:00	37	78	0.474	5	11	0.455	11	16	0.688	
9	21200005	1610612743	Denver	240:00	33	88	0.375	4	18	0.222	5	11	0.455	
10	21200005	1610612755	Philadelphia	240:00	30	85	0.353	7	25	0.280	17	21	0.810	
11	21200006	1610612745	Houston	240:00	39	79	0.494	10	27	0.370	17	23	0.739	
12	21200006	1610612765	Detroit	240:00	35	79	0.443	6	16	0.375	20	26	0.769	
13	21200007	1610612758	Sacramento	240:00	34	84	0.405	6	17	0.353	13	16	0.813	
14	21200007	1610612741	Chicago	240:00	33	79	0.418	2	9	0.222	25	33	0.758	
15	21200008	1610612740	New Orleans	240:00	35	80	0.438	4	17	0.235	21	23	0.913	
16	21200008	1610612759	San Antonio	240:00	38	80	0.475	6	20	0.300	17	26	0.654	
17	21200009	1610612742	Dallas	240:00	32	85	0.376	11	22	0.500	19	26	0.731	

Showing 1 to 17 of 31,340 entries, 29 total columns

Console Terminal Background Jobs

```
R - R 4.5.1 - ~/R
> library(dplyr)
> nba <- read.csv("final_data.csv")
> print(head(nba))
```

NIFTY +0.11% 11:24 01-12-2025

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

## SUBJECT : Data Analysis with SAS / SPSS / R

**RStudio**

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

S108-R PROGRAM PRAC7.R x dropped\_multiple x dropped\_range x

Filter

GAME_ID	TEAM_ID	TEAM_NAME	TEAM_ABBREVIATION	TEAM_CITY	HOME_TEAM	MIN	OREB	DREB	REB	AST
1	21200001	1610612764	Wizards	WAS	Washington	Cavaliers	240:00	18	21	39
2	21200001	1610612739	Cavaliers	CLE	Cleveland	Cavaliers	240:00	18	36	54
3	21200002	1610612748	Heat	MIA	Miami	Heat	240:00	5	31	36
4	21200002	1610612738	Celtics	BOS	Boston	Heat	240:00	7	34	41
5	21200003	1610612747	Lakers	LAL	Los Angeles	Lakers	240:00	15	31	46
6	21200003	1610612742	Mavericks	DAL	Dallas	Lakers	240:00	9	31	40
7	21200004	1610612761	Raptors	TOR	Toronto	Raptors	240:00	15	27	42
8	21200004	1610612754	Pacers	IND	Indiana	Raptors	240:00	9	37	46
9	21200005	1610612743	Nuggets	DEN	Denver	76ers	240:00	16	38	54
10	21200005	1610612755	76ers	PHI	Philadelphia	76ers	240:00	14	33	47
11	21200006	1610612745	Rockets	HOU	Houston	Pistons	240:00	12	33	45
12	21200006	1610612765	Pistons	DET	Detroit	Pistons	240:00	10	26	36
13	21200007	1610612758	Kings	SAC	Sacramento	Bulls	240:00	11	29	40
14	21200007	1610612741	Bulls	CHI	Chicago	Bulls	240:00	14	32	46
15	21200008	1610612740	Hornets	NOH	New Orleans	Hornets	240:00	9	34	43
16	21200008	1610612759	Spurs	SAS	San Antonio	Hornets	240:00	10	33	43
17	21200009	1610612742	Mavericks	DAL	Dallas	Jazz	240:00	8	32	40

Showing 1 to 17 of 31,340 entries. 23 total columns

Console Terminal Background Jobs

```
R 4.5.1 - ~/ ~> View(dropped_range)
>
```

**RStudio**

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

S108-R PROGRAM PRAC7.R x dropped\_range x dropped\_team x

Filter

GAME_ID	TEAM_ID	TEAM_ABBREVIATION	TEAM_CITY	HOME_TEAM	MIN	FGM	FGA	FG_PCT	FG3M	FG3A	FG%
1	21200001	1610612764	WAS	Washington	Cavaliers	240:00	32	90	0.356	8	32
2	21200001	1610612739	CLE	Cleveland	Cavaliers	240:00	36	79	0.456	7	20
3	21200002	1610612748	MIA	Miami	Heat	240:00	43	79	0.544	8	16
4	21200002	1610612738	BOS	Boston	Heat	240:00	39	75	0.520	6	13
5	21200003	1610612747	LAL	Los Angeles	Lakers	240:00	38	77	0.494	3	13
6	21200003	1610612742	DAL	Dallas	Lakers	240:00	40	85	0.471	5	15
7	21200004	1610612761	TOR	Toronto	Raptors	240:00	33	91	0.363	6	17
8	21200004	1610612754	IND	Indiana	Raptors	240:00	37	78	0.474	5	11
9	21200005	1610612743	DEN	Denver	76ers	240:00	33	88	0.375	4	18
10	21200005	1610612755	PHI	Philadelphia	76ers	240:00	30	85	0.353	7	25
11	21200006	1610612745	HOU	Houston	Pistons	240:00	39	79	0.494	10	27
12	21200006	1610612765	DET	Detroit	Pistons	240:00	35	79	0.443	6	16
13	21200007	1610612758	SAC	Sacramento	Bulls	240:00	34	84	0.405	6	17
14	21200007	1610612741	CHI	Chicago	Bulls	240:00	33	79	0.418	2	9
15	21200008	1610612740	NOH	New Orleans	Hornets	240:00	35	80	0.438	4	17
16	21200008	1610612759	SAS	San Antonio	Hornets	240:00	38	80	0.475	6	20
17	21200009	1610612742	DAL	Dallas	Jazz	240:00	32	85	0.376	11	22

Showing 1 to 17 of 31,340 entries. 31 total columns

Console Terminal Background Jobs

```
R 4.5.1 - ~/ ~> View(dropped_team)
>
```

**RStudio**

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

S108-R PROGRAM PRAC7.R x dropped\_team x

Filter

GAME_ID	TEAM_ID	TEAM_ABBREVIATION	TEAM_CITY	HOME_TEAM	MIN	FGM	FGA	FG_PCT	FG3M	FG3A	FG%
1	21200001	1610612764	WAS	Washington	Cavaliers	240:00	32	90	0.356	8	32
2	21200001	1610612739	CLE	Cleveland	Cavaliers	240:00	36	79	0.456	7	20
3	21200002	1610612748	MIA	Miami	Heat	240:00	43	79	0.544	8	16
4	21200002	1610612738	BOS	Boston	Heat	240:00	39	75	0.520	6	13
5	21200003	1610612747	LAL	Los Angeles	Lakers	240:00	38	77	0.494	3	13
6	21200003	1610612742	DAL	Dallas	Lakers	240:00	40	85	0.471	5	15
7	21200004	1610612761	TOR	Toronto	Raptors	240:00	33	91	0.363	6	17
8	21200004	1610612754	IND	Indiana	Raptors	240:00	37	78	0.474	5	11
9	21200005	1610612743	DEN	Denver	76ers	240:00	33	88	0.375	4	18
10	21200005	1610612755	PHI	Philadelphia	76ers	240:00	30	85	0.353	7	25
11	21200006	1610612745	HOU	Houston	Pistons	240:00	39	79	0.494	10	27
12	21200006	1610612765	DET	Detroit	Pistons	240:00	35	79	0.443	6	16
13	21200007	1610612758	SAC	Sacramento	Bulls	240:00	34	84	0.405	6	17
14	21200007	1610612741	CHI	Chicago	Bulls	240:00	33	79	0.418	2	9
15	21200008	1610612740	NOH	New Orleans	Hornets	240:00	35	80	0.438	4	17
16	21200008	1610612759	SAS	San Antonio	Hornets	240:00	38	80	0.475	6	20
17	21200009	1610612742	DAL	Dallas	Jazz	240:00	32	85	0.376	11	22

Showing 1 to 17 of 31,340 entries. 31 total columns

Console Terminal Background Jobs

```
R 4.5.1 - ~/ ~> View(dropped_team)
>
```

11:24 01-12-2025