

What is the size of a data frame in R?

Authored by
stats writer

June 26, 2024

RECOMMENDED CITATION

stats writer (2024). *What is the size of a data frame in R?*. PSYCHOLOGICAL SCALES.
Retrieved from <https://scales.arabpsychology.com/?p=154286>

A data frame in R is a two-dimensional structure that is used to store data in a tabular format. The size of a data frame refers to the total number of rows and columns it contains. It is often denoted as "n x m", where "n" represents the number of rows and "m" represents the number of columns. The size of a data frame can vary depending on the amount of data it contains, but it can typically handle thousands of rows and hundreds of columns. The size of a data frame can be determined using the "nrow()" and "ncol()" functions in R.

Find the Size of a Data Frame in R

You can use the following functions in R to display the size of a given data frame:

nrow: Display number of rows in data frame
ncol: Display number of columns in data frame
dim: Display dimensions (rows and columns) of data frame

The following examples show how to use each of these functions in practice with the following data frame:

```
#create data frame
```

```
df <- data.frame(team=c('A', 'B', 'C', 'D', 'E', 'F'),  
points=c(99, 90, 86, 88, 95, 99),  
assists=c(33, 28, 31, 39, 34, 25),  
rebounds=c(12, NA, 24, 24, 28, 33))
```

```
#view data frame
```

```
df
```

team points assists rebounds

1 A 99 33 12

2 B 90 28 NA

3 C 86 31 24

4 D 88 39 24

5 E 95 34 28

6 F 99 25 33

Example 1: Use nrow() to Display Number of Rows

The following code shows how to use the nrow() function to display the total number of rows in the data frame:

```
#display total number of rows in data frame
```

```
nrow(df)
```

```
6
```

There are 6 total rows.

Note that we can also use the function to display the total number of rows with no NA values:

```
#display total number of rows in data frame with no NA
```

values

nrow(df)

5

There are 5 total rows that have no NA values.

Example 2: Use ncol() to Display Number of Columns

The following code shows how to use the ncol() function to display the total number of columns in the data frame:

```
#display total number of columns in data frame  
ncol(df)
```

4

There are 4 total columns.

Example 3: Use dim() to Display Dimensions

The following code shows how to use the dim() function to display the dimensions (rows and columns) of the data frame:

```
#display dimensions of data frame
```

```
dim(df)
```

```
6 4
```

This tells us there are 6 rows and 4 columns in the data frame.

You can also use brackets with the `dim()` function to display only the rows or columns:

```
#display number of rows of data frame
```

```
dim(df)
```

```
6
```

```
#display number of columns of data frame
```

```
dim(df)
```

```
4
```