

# How can I convert a column in a DataFrame to a numeric type?

Authored by  
**stats writer**

June 24, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I convert a column in a DataFrame to a numeric type?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=149749>

The process of converting a column in a DataFrame to a numeric type involves using the appropriate method or function to change the data type of the values within the column from their current format to a numerical format. This can be achieved in various ways, such as using the "astype()" function or the "to\_numeric()" method, depending on the programming language or software being used. By converting a column to a numeric type, the data can be manipulated and analyzed more accurately and efficiently for various purposes.

How to convert the DataFrame column to numeric type in R language? You can achieve this by using `as.numeric()` and `transform()` functions. In this [R DataFrame](#) article, we will discuss how to convert a dataframe column to a numeric type with examples.

There are two ways to convert dataframe column to a numeric type. They are:

Using `as.numeric()` Using `transform()` with `as.numeric()`

## 1. Quick Look

Following are quick examples.

```
#Create dataframe with 5 rows and 3 columns
my_dataframe=data.frame(column1=c('2','1','3','4','5'),column2=c('1','2','3','5',
,'4'),column3=c('56','23','45','67','43'))
```

```
#Display dataframe
print(my_dataframe)
```

```
#Return the datatype of each column
print(sapply(my_dataframe, class))
```

```
#Convert column1 column type to numeric
my_dataframe$column1 = as.numeric(as.character(my_dataframe$column1))
```

```
#Return the datatype of each column
print(sapply(my_dataframe, class))
```

```
#Return the datatype of each column by converting column to numeric with transform()
print(sapply(transform(my_dataframe,column1 = as.numeric(column1)), class))
```

Let's create an R dataframe with 5 rows and 3 columns.

```
#Create dataframe with 5 rows and 3 columns
```

```
my_dataframe=data.frame(column1=c('2','1','3','4','5'),column2=c('1','2','3','5','4'),
column3=c('56','23','45','67','43'))
```

```
#Display dataframe
print(my_dataframe)
```

```
#Return the datatype of each column
print(sapply(my_dataframe, class))
```

### Output:

```
# Output
column1 column2 column3
1 2 1 56
2 1 2 23
3 3 3 45
4 4 5 67
5 5 4 43
```

```
# Data types
column1 column2 column3
"character" "character" "character"
```

We can see that all the column datatypes are of `character` type, we can get the data type of each column in the dataframe using the `sapply()` function. Now, let's see how to convert the dataframe column to a numeric type.

## 1. Convert DataFrame Column to Numeric Type using `as.numeric()`

`as.numeric()` is used to convert the R dataframe (`data.frame`) column to the numeric type from the character type. Here, it will take the column name in the form of a character type.

### Syntax:

```
# Syntax
my_dataframe$column = as.numeric(as.character(my_dataframe$column))
```

where `my_dataframe` is the input dataframe and the `column` refers to the column name.

**Example:**

In this example, we will convert `column1` to a numeric type.

```
#convert column1 column type to numeric
my_dataframe$column1 = as.numeric(as.character(my_dataframe$column1))

#return the datatype of each column
print(sapply(my_dataframe, class))
```

**Output:**

```
column1 column2 column3
"numeric" "character" "character"
```

From the above code, we can see that `column1` is converted to a numeric type.

## 2. Convert DataFrame Column to Numeric Type using `transform()` with `as.numeric()`

`transform()` will take two parameters. the first parameter is the dataframe input and the second parameter takes `as.numeric()` method which will convert the specified column to numeric

**Syntax:**

```
transform(my_dataframe, column1 = as.numeric(column))
```

where `my_dataframe` is the input dataframe and the `column` refers to the column name.

**Example:**

In this example, we will convert `column1` to a numeric type and use `sapply()` function to get the data types for columns.

```
#return the datatype of each column by converting column to numeric with
transform()
print(sapply(transform(my_dataframe, column1 = as.numeric(column1)), class))
```

**Output:**

```
column1 column2 column3  
"numeric" "character" "character"
```

From the above code, we can see that column1 is converted to a numeric type.

**Conclusion**

From the above article, we saw how to convert an R dataframe column to a Numeric Type using `as.numeric()` and `transform()` with `as.numeric()` methods.

**Related Articles****References**

[as.numeric\(\) in Rtransform\(\)](#)