

# How can I fix the “could not convert string to float” error in Pandas?

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## RECOMMENDED CITATION

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This error typically occurs when attempting to convert a string to a float in Pandas. To fix this, the string must be in a valid numerical format, such as including only numbers and a decimal point. Additionally, any commas or other non-numerical characters must be removed. If the string still cannot be converted, it may be necessary to check for any missing or incorrect data values. Once these issues are addressed, the string should be able to be successfully converted to a float.

## **Fix in Pandas: could not convert string to float**

**One common error you may encounter when using pandas is:**

**ValueError: could not convert string to float: '\$400.42'**

**This error usually occurs when you attempt to convert a string to a float in pandas, yet the string contains one or more of the following:**

**Spaces Commas Special characters**

**When this occurs, you must first remove these characters from the string before converting it to a float.**

**The following example shows how to resolve this error in practice.**

**How to Reproduce the Error**

**Suppose we have the following pandas DataFrame:**

```
import pandas as pd

#create DataFrame
df = pd.DataFrame({'store': ,
'revenue': })

#view DataFrame
print(df)

store revenue
0 A $400.42
1 B $100.18
2 C $243.75
3 D $194.22

#view data type of each column
print(df.dtypes)

store object
revenue object
dtype: object
```

Now suppose we attempt to convert the revenue column from a string to a float:

```
#attempt to convert 'revenue' from string to float
```

```
df = df.astype(float)
```

**ValueError: could not convert string to float: '\$400.42'**

We receive an error since the revenue column contains a dollar sign in the strings.

How to Fix the Error

The way to resolve this error is to use the `replace()` function to replace the dollar signs in the revenue column with nothing before performing the conversion:

```
#convert revenue column to float
```

```
df = df.apply(lambda x: float(x.split()).replace('$', ""))
```

```
#view updated DataFrame
```

```
print(df)
```

```
store revenue
```

```
0 A 400.42
```

```
1 B 100.18
```

```
2 C 243.75
```

```
3 D 194.22
```

```
#view data type of each column
```

```
print(df.dtypes)
```

```
store object
```

```
revenue float64
```

```
dtype: object
```

**Notice that we're able to convert the revenue column from a string to a float and we don't receive any error since we removed the dollar signs before performing the conversion.**

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