

# How can I fix the ValueError: cannot convert float NaN to integer error?

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## RECOMMENDED CITATION

stats writer (2024). *How can I fix the ValueError: cannot convert float NaN to integer error?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=143286>

The ValueError: cannot convert float NaN to integer error occurs when attempting to convert a floating point value that is not a number (NaN) into an integer. This error can be fixed by first checking the input data for any NaN values and then replacing them with a valid numerical value. Alternatively, the data can be converted to a float type before attempting to convert it into an integer. Additionally, using try-except statements can help handle and handle these types of errors in a more efficient manner.

## **Fix: ValueError: cannot convert float NaN to integer**

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

**ValueError: cannot convert float NaN to integer**

**This error occurs when you attempt to convert a column in a pandas DataFrame from a float to an integer, yet the column contains NaN values.**

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

**How to Reproduce the Error**

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

```
import pandas as pd  
import numpy as np  
  
#create DataFrame  
df = pd.DataFrame({'points': ,
```

```
'assists': ,  
'rebounds': })
```

```
#view DataFrame
```

```
df
```

```
points assists rebounds
```

```
0 25 5 11
```

```
1 12 7 NaN
```

```
2 15 7 10
```

```
3 14 9 6
```

```
4 19 12 5
```

```
5 23 9 NaN
```

```
6 25 9 9
```

```
7 29 4 12
```

Currently the 'rebounds' column is of the data type 'float.'

```
#print data type of 'rebounds' column
```

```
df.dtypes
```

```
dtype('float64')
```

Suppose we attempt to convert the 'rebounds' column

**from a float to an integer:**

```
#attempt to convert 'rebounds' column from float to integer
```

```
df = df.astype(int)
```

**ValueError: cannot convert float NaN to integer**

**We receive a ValueError because the NaN values in the 'rebounds' column cannot be converted to integer values.**

**How to Fix the Error**

**The way to fix this error is to deal with the NaN values before attempting to convert the column from a float to an integer.**

**We can use the following code to first identify the rows that contain NaN values:**

```
#print rows in DataFrame that contain NaN in 'rebounds' column
```

```
print(df.isnull())
```

**points assists rebounds**

```
1 12 7 NaN
```

```
5 23 9 NaN
```

We can then either drop the rows with NaN values or replace the NaN values with some other value before converting the column from a float to an integer:

```
#drop all rows with NaN values
```

```
df = df.dropna()
```

```
#convert 'rebounds' column from float to integer
```

```
df = df.astype(int)
```

```
#view updated DataFrame
```

```
df
```

```
points assists rebounds
```

```
0 25 5 11
```

```
2 15 7 10
```

```
3 14 9 6
```

```
4 19 12 5
```

```
6 25 9 9
```

```
7 29 4 12
```

```
#view class of 'rebounds' column
```

```
df.dtypes
```

```
dtype('int64')
```

## Method 2: Replace NaN Values

```
#replace all NaN values with zeros
```

```
df = df.fillna(0)
```

```
#convert 'rebounds' column from float to integer
```

```
df = df.astype(int)
```

```
#view updated DataFrame
```

```
df
```

```
points assists rebounds
```

```
0 25 5 11
```

```
1 12 7 0
```

```
2 15 7 10
```

```
3 14 9 6
```

```
4 19 12 5
```

```
5 23 9 0
```

```
6 25 9 9
```

```
7 29 4 12
```

```
#view class of 'rebounds' column
```

```
df.dtypes
```

## **dtype('int64')**

**Note that both methods allow us to avoid the ValueError and successfully convert the float column to an integer column.**

**The following tutorials explain how to fix other common errors in Python:**

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