# Can only integer scalar arrays be converted to a scalar index in Fix?

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The function "Fix" is designed to convert an integer scalar array into a scalar index. This means that only arrays containing integer values can be converted, and any other type of array will not be compatible with this conversion.

## Fix: only integer scalar arrays can be converted to a scalar index

## One error you may encounter when using Python is:

## TypeError: only integer scalar arrays can be converted to a scalar index

## This error usually occurs for one of two reasons:

## 1. You attempted to perform array indexing on a list.

## 2. You attempted to concatenate two matrices using incorrect syntax.

## The following examples shows how to avoid these errors in both scenarios.

### Example 1: You attempted to perform array indexing on a list.

## Suppose we attempt to use the following code to create a line chart in matplotlib with a legend and labels:

## import numpy as np

**#create a list of values**
**data =**

**#choose 3 random values from list**
**random_values = np.random.choice(range(len(data)), size=2)**

**#attempt to use indexing to access elements in list**
**random_vals = data**

**#view results**
**random_vals**

**TypeError: only integer scalar arrays can be converted to a scalar index**

**We receive an error because we attempted to use array indexing on a list.**

**To avoid this error, we must first convert the list to a NumPy array by using np.array() as follows:**

**import numpy as np**

**#create a list of values**
**data =**

```
#choose 3 random values from list
random_values = np.random.choice(range(len(data)), size=2)

#attempt to use indexing to access elements in list
random_vals = np.array(data)

#view results
random_vals

array()
```

This time we're able to randomly select two values from the list without any errors since we first converted the list to a NumPy array.

### Example 2: You attempted to concatenate two matrices using incorrect syntax.

Suppose we attempt to use the following code to concatenate two NumPy matrices together:

```
import numpy as np

#create twoNumPy matrices
mat1 = np.matrix(, ])
```

**mat2 = np.matrix(, ])**

**#attempt to concatenate both matrices**
**np.concatenate(mat1, mat2)**

**TypeError: only integer scalar arrays can be converted to a scalar index**

**We receive an error because we failed to supply the matrices in the form of a tuple to the concatenate() function.**

**import numpy as np**

**#create twoNumPy matrices**
**mat1 = np.matrix(, ])**
**mat2 = np.matrix(, ])**

**#attempt to concatenate both matrices**
**np.concatenate((mat1, mat2))**

**matrix(,**
**,**
**,**
**])**

## This time we're able to concatenate the two matrices without any error.

### Additional Resources

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