

How can I find the index of a specific value in a NumPy array?

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To find the index of a specific value in a NumPy array, one can use the built-in function "np.where()". This function takes in two parameters - the array and the value to be searched, and returns a tuple of arrays containing the indices of the matching elements. The first array in the tuple represents the row indices and the second array represents the column indices. This allows for easy access to the index of the desired value in the array. This method is efficient and convenient for locating the index of a specific value in a NumPy array.

Find Index of Value in NumPy Array (With Examples)

You can use the following methods to find the index position of specific values in a NumPy array:

Method 1: Find All Index Positions of Value

```
np.where(x==value)
```

Method 2: Find First Index Position of Value

```
np.where(x==value)
```

Method 3: Find First Index Position of Several Values

```
#define values of interest
```

```
vals = np.array()
```

```
#find index location of first occurrence of each value of interest
```

```
sorter = np.argsort(x)
```

sorter

The following examples show how to use each method in practice.

Method 1: Find All Index Positions of Value

The following code shows how to find every index position that is equal to a certain value in a NumPy array:

```
import numpy as np
```

```
#define array of values
```

```
x = np.array()
```

```
#find all index positions where x is equal to 8
```

```
np.where(x==8)
```

```
(array(),)
```

From the output we can see that index positions 4, 5, and 6 are all equal to the value 8.

Method 2: Find First Index Position of Value

The following code shows how to find the first index

position that is equal to a certain value in a NumPy array:

```
import numpy as np
```

```
#define array of values
```

```
x = np.array()
```

```
#find first index position where x is equal to 8
```

```
np.where(x==8)
```

```
4
```

From the output we can see that the value 8 first occurs in index position 4.

Method 3: Find First Index Position of Several Values

```
import numpy as np
```

```
#define array of values
```

```
x = np.array()
```

```
#define values of interest
```

```
vals = np.array()
```

#find index location of first occurrence of each value of

interest

sorter = np.argsort(x)

sorter

array()

From the output we can see:

The value 4 first occurs in index position 0. The value 7 first occurs in index position 1. The value 8 first occurs in index position 4.

The following tutorials explain how to perform other common operations in NumPy: