How do you convert a list to a NumPy array in Python? Can you provide some examples of how this can be done?

Authored by

stats writer

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Converting a list to a NumPy array in Python involves using the "array()" function from the NumPy library. This function takes in a list as an argument and returns a NumPy array. This conversion allows for efficient manipulation and analysis of data as NumPy arrays have specialized methods and functions.

Here is an example of how a list can be converted to a NumPy array:

list1 =
array1 = np.array(list1)

This will create a NumPy array, array1, containing the elements of list1. NumPy arrays can also be multidimensional, so a list of lists can be converted to a multidimensional NumPy array.

list2 = , ,]
array2 = np.array(list2)

This will create a 3x3 multidimensional NumPy array, array2, containing the elements of list2.

In conclusion, converting a list to a NumPy array is a simple process that can be done using the "array()" function from the NumPy library. This allows for efficient manipulation and analysis of data, making it a useful tool for data analysis and scientific computing.

Convert List to NumPy Array (With Examples)

You can use the following basic syntax to convert a list in Python to a NumPy array:

import numpy as np

my_list =

my_array = np.asarray(my_list)

The following examples shows how to use this syntax

in practice.

Example 1: Convert List to NumPy Array

The following code shows how to convert a list in Python to a NumPy array:

```
import numpy as np

#create list of values
my_list =

#convert list to NumPy array
my_array = np.asarray(my_list)

#view NumPy arrayprint(my_array)

#view object typetype(my_array)

numpy.ndarray
```

Note that you can also use the dtype argument to specify a certain data type for the new NumPy array when performing the conversion:

```
import numpy as np
```

#create list of values
my_list =

#convert list to NumPy array
my_array = np.asarray(my_list, dtype=np.float64)

#view data type of NumPy array
print(my_array.dtype)

float64

Example 2: Convert List of Lists to NumPy Array of Arrays

The following code shows how to convert a list of lists to a NumPy array of arrays:

import numpy as np

#create list of lists
my_list_of_lists = , ,]

#convert list to NumPy array
my_array = np.asarray(my_list_of_lists)

#view NumPy array
print(my_array)

]

We can then use the shape function to quickly get the dimensions of the new array of arrays:

print(my_array.shape)

(3, 3)

This tells us that the NumPy array of arrays has three rows and three columns.

The following tutorials explain how to perform other common data conversions in Python: