



ARRAYS

numpy

Arrays

NumPy



NumPy arrays, also known as ndarray (N-dimensional array), are a fundamental data structure in the NumPy library, which is a core library for numerical computing in Python. NumPy arrays are similar to Python lists, but they provide more efficient storage and operations for numerical data.

NumPy arrays are a versatile and efficient data structure for numerical computing in Python. They provide a solid foundation for scientific computing, data analysis, machine learning, and other computational tasks, and are widely used in the Python ecosystem for these purposes.

NumPy arrays are widely used in scientific computing, data analysis, machine learning, and other numerical applications due to their efficiency, versatility, and extensive functionality.

Arrays

NumPy One Dimension



```
from numpy import *  
  
ar1 = array([86.4,87,53,98,43])  
print(ar1)  
print('-----')  
for i in ar1:  
    print(i)
```

```
[86.4 87.  53.  98.  43. ]  
-----  
86.4  
87.0  
53.0  
98.0  
43.0
```

Arrays

NumPy Multi Dimension



```
import numpy as np

arr1 = np.array([[1,2,3],
                 [4,5,6],
                 [7,8,9]])

print(arr1)
print('-----')
print(arr1[1])
print('-----')
print(arr1[:,1])
print('-----')
print(arr1[0:2,1:2])
print('-----')
print(arr1[1:,0:2])
```

```
[[1 2 3]
 [4 5 6]
 [7 8 9]]
-----
[4 5 6]
-----
[2 5 8]
-----
[[2]
 [5]]
-----
[[4 5]
 [7 8]]
```