

NUMPY ARR

import numpy as np

5 arr = np.array ([1,2,3,4])

arr + 1

↳ ([2,3,4,5])

arr * 5

↳ ([5,10,15,20])

10 Similarly we can do all operations on array

arr.max()

↳ 4

arr.min()

↳ 1

15 arr = array ([[1,2,3],
[4,5,6],
[7,8,9]])

arr.max(axis=0) (columnwise)

↳ [7,8,9]

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Sorting

name

↓

(1) rowwise / (0) columnwise

↑

kind of sort

↑

np.sort(arr, axis=1, kind='mergesort')

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mergesort → better than quicksort algorithm

default → rowwise

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to merge array in stacks

arr1 = [1, 2, 3]

arr2 = [4, 5, 6]

np.vstack(arr1, arr2)

↳ $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix}$ → vertical stack

np.hstack(arr1, arr2)

↳ [1, 2, 3, 4, 5, 6]

(horizontal stack)

np.concatenate(arr1, arr2, axis = 0)

✓ 0 → vertical stack

1 → horizontal stack

Now for splitting

↳ np.hsplit(arr, 2)

↓
horizontal

vsplit

↓
in 2 arrays