

2024 / 4 / 25 التاريخ

## Task 9

الموضوع

Numpy for Machine learning:

What's Numpy? special type of array in python.

(same as list but more Cooler)

Some Functions:

Range <sup>(10)</sup> → ~~np~~ np.arange(10)

step <sup>(0, 10, 2)</sup> → np.arange(0, 10, 2) ↓ Jump every two

zero → np.zeros(10) all list in zero value

full → np.full((2, 10), 6) make full of value

Multy climentional → np.full((2, 10))  
2d-array

Slicing numpy array:

NP1 [1:5]

start → end  
(not in)

[ : 3 ]

steps till the end

from start

[ 1 : ]

till the end

2d

[ 1, 2 ]

first row

second element



You can use universal functions too.

(numpy does universal functions) Search :)

Copy VS view

Same difference as: doesn't change

by value VS by reference

Shape and reshape

Shape: is shown element in how many row.

reshape: change any dimension to any u want.

np.reshape(3, 4) in every 3 rows put 4 num

reshape to 1-dim?  $\Rightarrow$  reshape(-1)



basic for loop like python but

`np.nditer()` make it easier to don't

Care about how many elim.

Sort return Copy not view

Numerical    Alphabetically    booleans    2d

`np.sort`

تابع كذا

Search → `np.where(Condition)`

for only the index `x[0]`

to filter make list and put conditions