21-05-2025

Agenda:—

→ Numpy

→ 1D → array → vector

2D → array → matrix

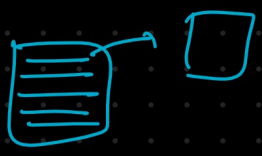
3D → array → matrix 3D

>3D → nDarray

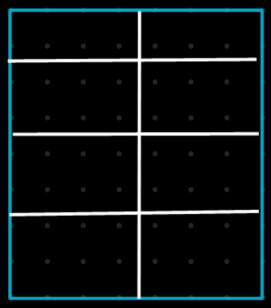
Identity matrix

2D , Diagonal → 1 → linear algebra

1	0	0
0	1	0
0	0	1



array →



(4,2, 1) np.full

① → [4,2] → memory

② → initialize all the memory space with value 1

Ex I want to create a numpy array of shape

[100 x 100 x 3] → 3D → time consuming

result

↓

→ allocate

→ initialize

chatgpt → create a image → dynamic image size

fixed image size

garbage

→ allocate →

→ random ← initialization

a = 3

"xxxxbcdef123"

3

garbage value

memory

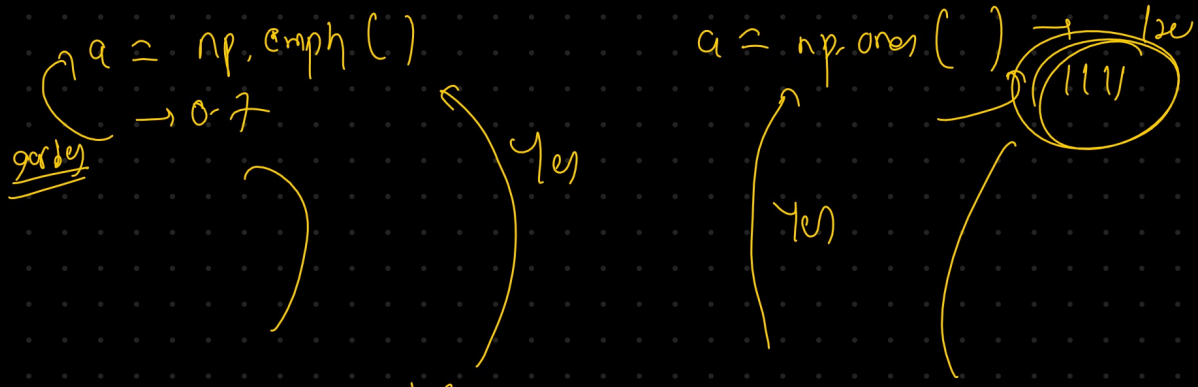
a = 3 → os → memory space → [garbage] → 3 → init value

np.empty((5,5))

a ←

→ [a = 3]

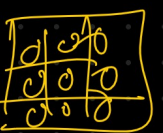
a = bite



p) Change the value later

a*1 =

axo =



1 1 1 1 1 →

0 0 0 0 0 →

0.2 0.1 0.3 0.9 0-1

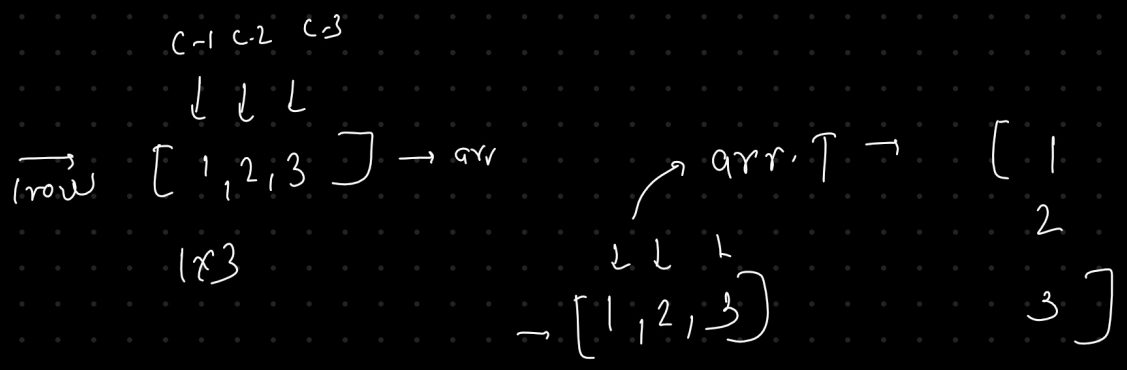
0 - 1 → 10

* 100 → 1 - 100 → float → int

activity

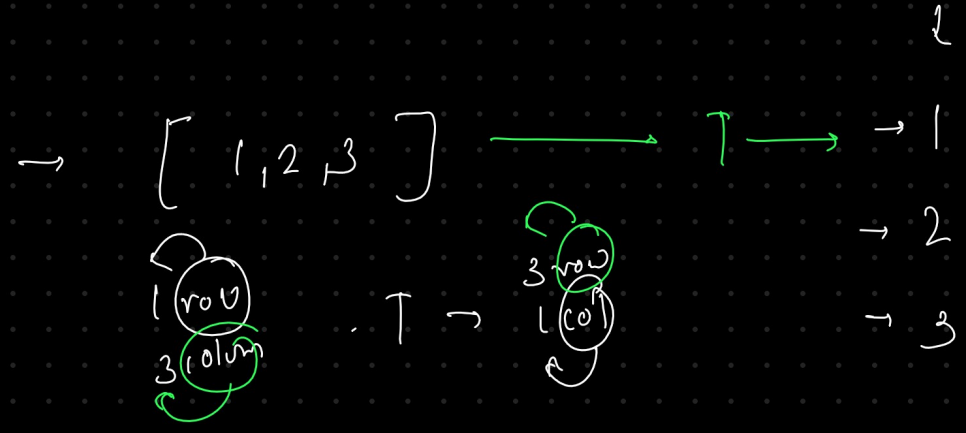
10 activity → randomly → assign → children

Unique → random

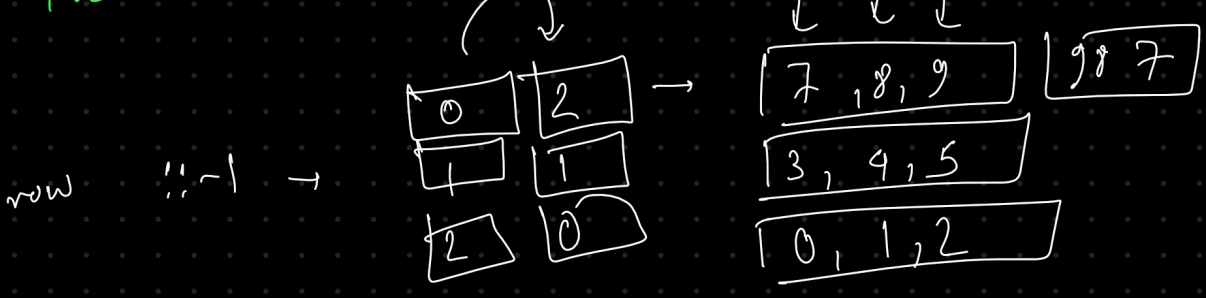


1, 3
r c

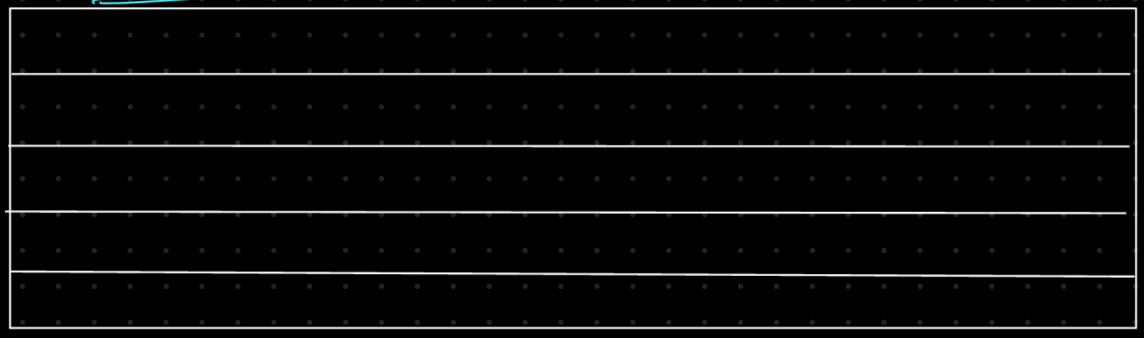
3r, 1c



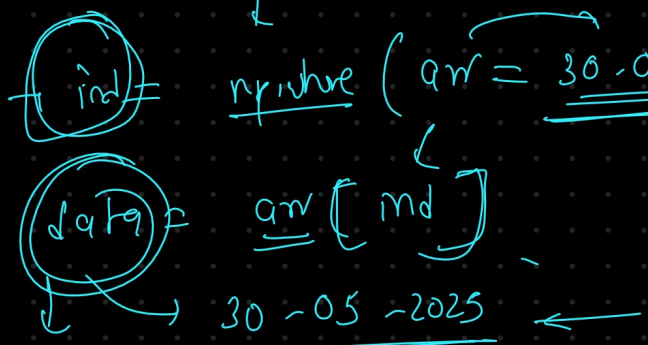
1x3 → 3x1

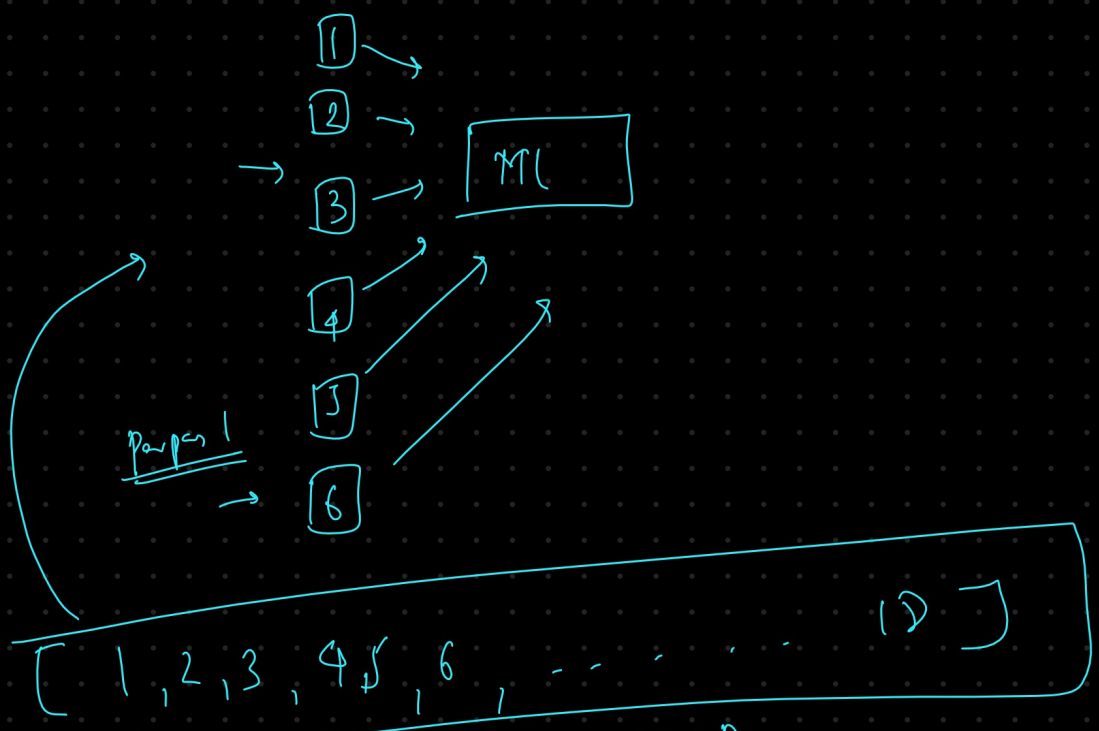


Cricket → Data → 2023 → 2025 .csv.txt



to work with data where the date is 30-05-2025



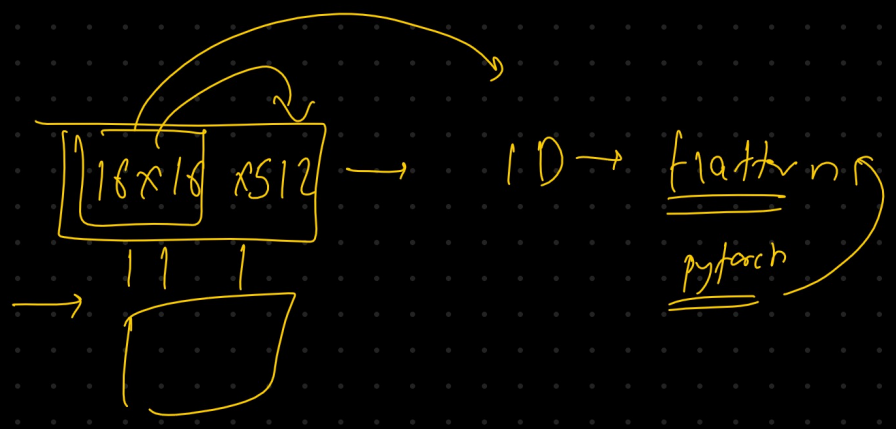


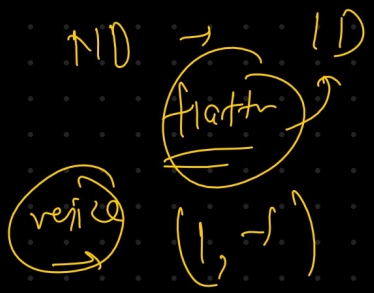
→ datapan

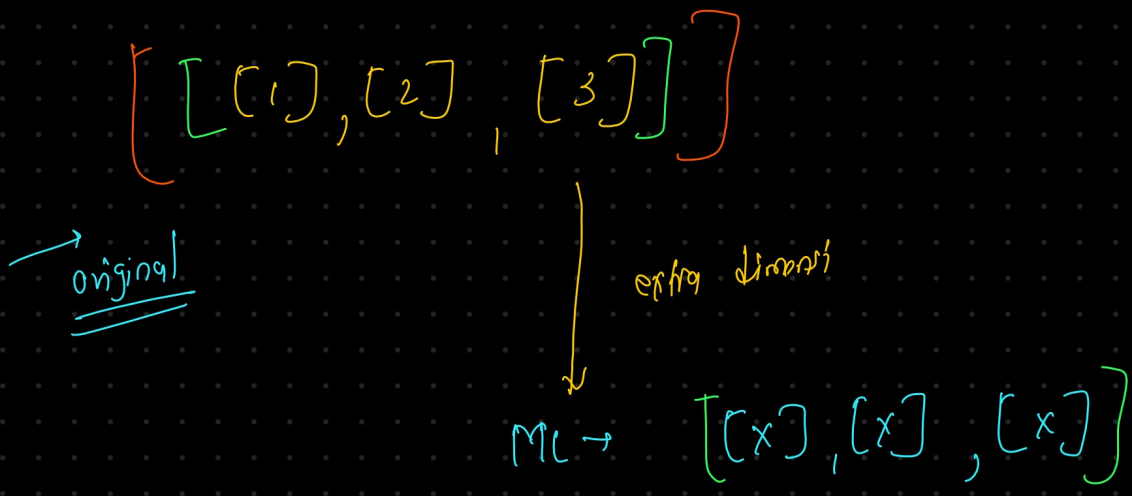
2D → 1D

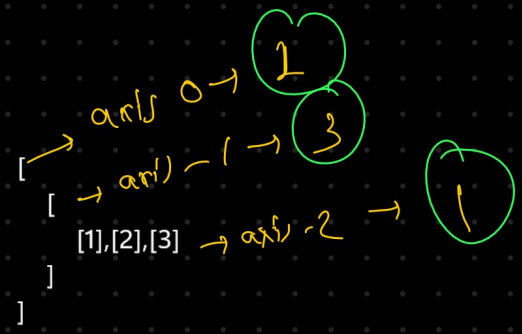
1D = [-1, 6] [_____]

for i in ar
mc(i)

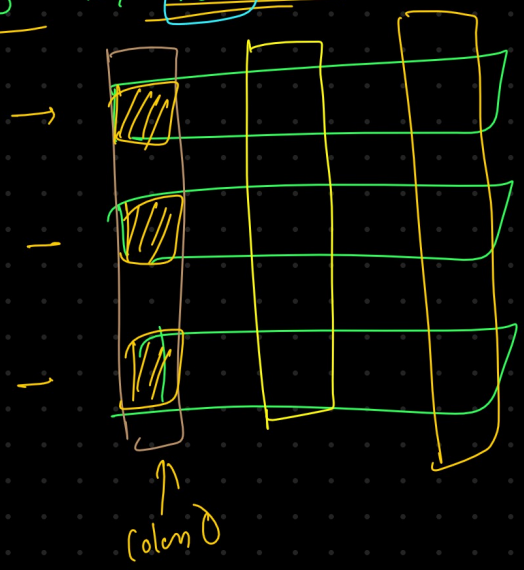

16x16 x512
1D
flatten
pytorch


ND
1D
flatten
reshape
(1, -1)


[[[1],[2],[3]]]
original
extra dimensions
ML
[[x],[x],[x]]

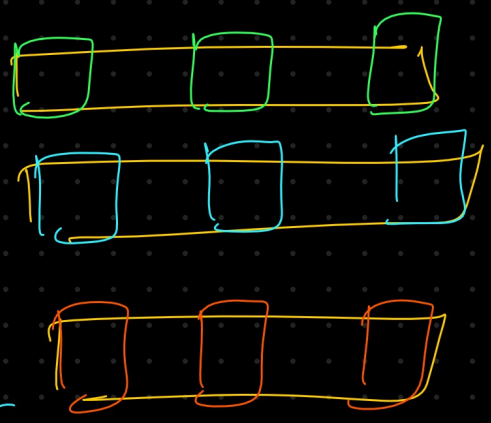

[
[
[1],[2],[3]
]
]
axis 0
1
axis -1
3
axis -2
1

axis = 0 → row wise



row wise,
column constant

axis = 1 → column wise



column wise,
row constant