

Agenda :

- Numpy
- Why? (Motivation)
- 1D, 2D, nD (Matrix)
- Basic ops

250+

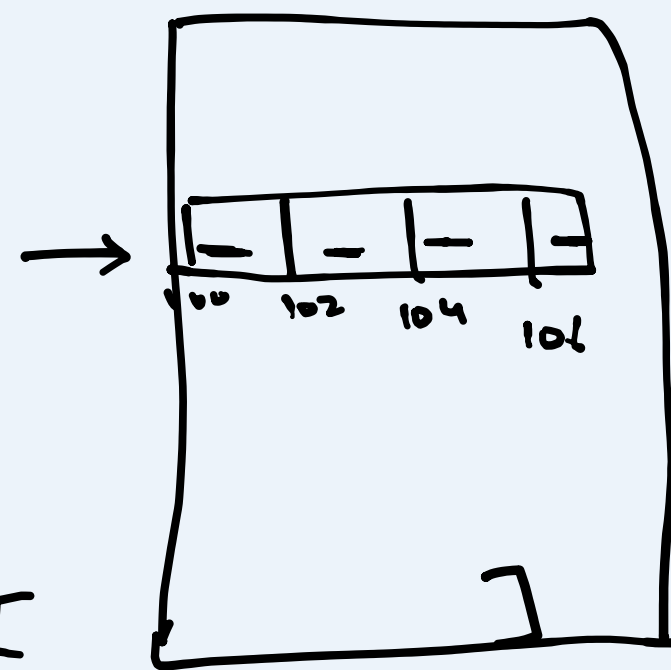
numpy ?
[]*

"C" language

array

list

[0, 0, 0, 0]
r1 r2 r3 r4



$\begin{bmatrix} 10 \\ 20 \\ 30 \end{bmatrix}$

$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$

- 1D array → Vector
- 2D array → Matrix
- 3D array → tensors
- 4D
- nD

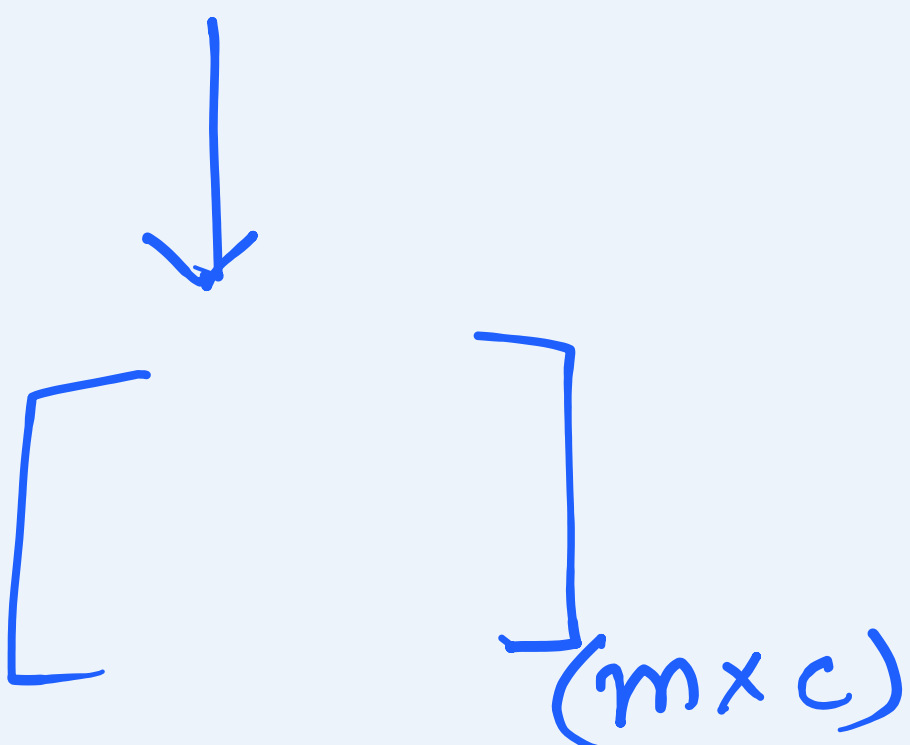
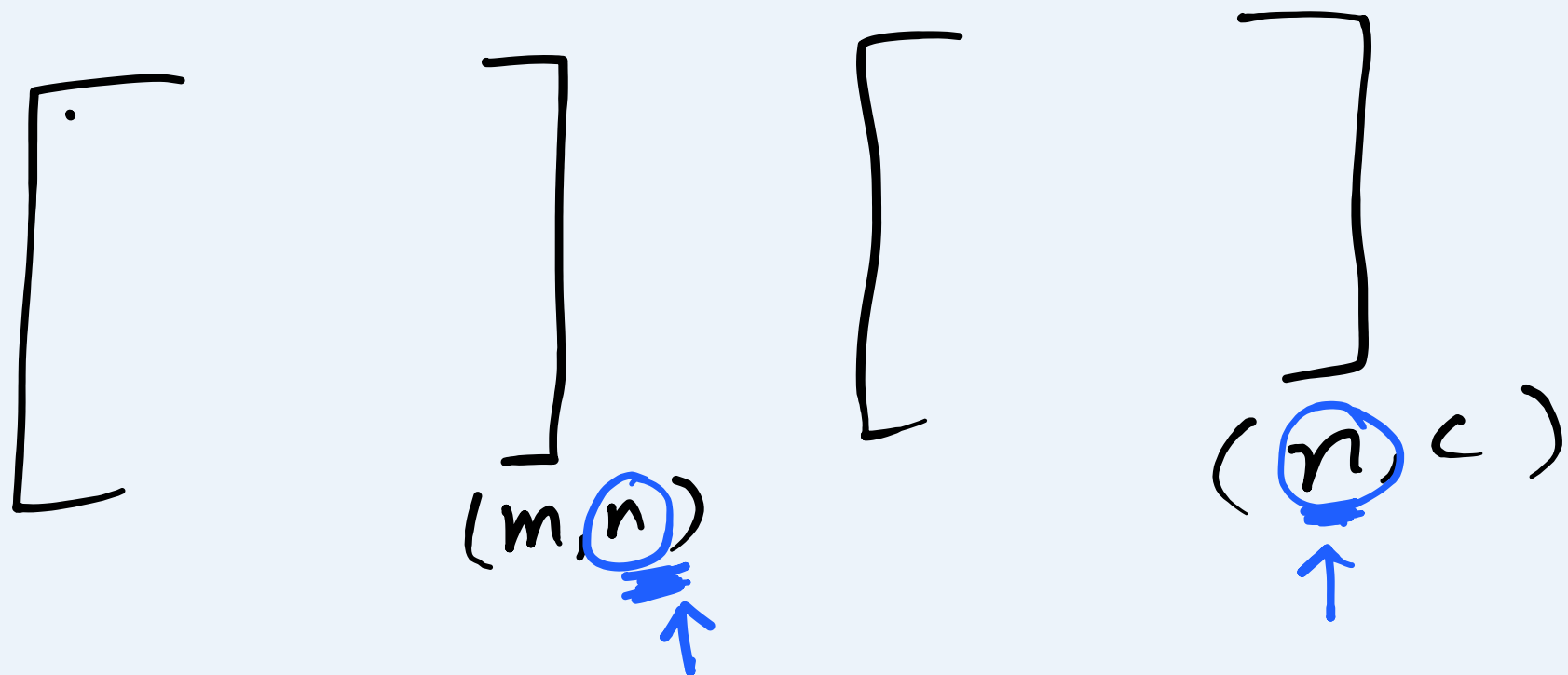
tensorflow

$x = \begin{bmatrix} 1 \\ 2 \\ 3 \\ 4 \\ \vdots \\ 10 \end{bmatrix}$

np.log(x)

$\Rightarrow \begin{bmatrix} \text{np.log}(1) \\ \text{np.log}(2) \\ \vdots \\ \text{np.log}(10) \end{bmatrix}$

Matrix Multiplication



Transpose

rows → Col^m