March 20, 2023

Numpy

Numerical analysis with Numpy computing package

Mathematical objects of linear algebra

Scalars: 6 → 0D

Vectors: $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ $\begin{bmatrix} 1 & 2 & 3 \end{bmatrix}$ → 1D rows or columns of value

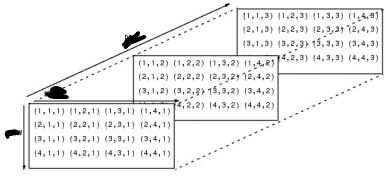
↑ vectors

↑ columns

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

2D → array of rows and columns of values

Tensor:



3D arrays of rows and columns with 3 dimensions