

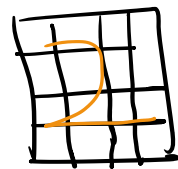
Tensor: is a multidim Array and design for mathematical computation

Types of tensor

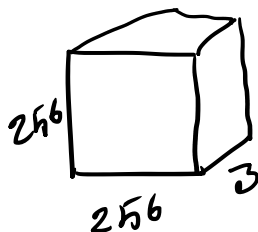
0D: Tensor: simple a scalar number

1D: simple a embedding ONE $[1, 0, 0, 1, 0]$

2D: Simple Gray Scale images



3D: RGB images



$(3, 256, 256)$

4D: Batch of 3D images

5D: A video clip

Why use in Deep Learning

- Tensor are very efficiency on DL math calculation
- Representation Real world data is easy
- Efficiency increase : its can use GPU. boost 100x

Where use in Tensor:

- Training data store as tensor.
- Weight and bias store in tensor
- Matrix operation
- Training process - forward pass, backward pass