nn.linear

```

Copy fnlinear(inputs:Tensor, weights:Tensor, bias:Tensor)->Tensor

```

Performs a linear transformation of the input tensor using the provided weights and bias.

Args

- tensor
- (@Tensor
-) - A 1D tensor representing the input tensor.
- weights
- (@Tensor
-) - A 2D tensor representing the weights.
- bias
- (@Tensor
-) - A 1D tensor representing the bias.
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Panics

- This function asserts that the input tensorinputs
- must be 1D, weights tensor must be 2D, and bias tensor must be 1D.
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Returns

ATensor representing the result of the linear transformation.

Examples

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Copy usecore::array::{ArrayTrait,SpanTrait};

useorion::operators::tensor::{TensorTrait,Tensor,I32Tensor}; useorion::operators::nn::{NNTrait,I32NN};

fnlinear_example()->Tensor { // We instantiate inputs here. letinputs=TensorTrait::new( shape:array![3].span(), data:array![ -71,38,62, ] .span(), );

// We instantiate weights here. letweights=TensorTrait::new( shape:array![2,3].span(), data:array![ -8, 64, 40, -33, -34, -20, ] .span(), );

// We instantiate bias here. letbias=TensorTrait::new( shape:array![2].span(), data:array![61,-61].span(), );

returnNNTrait::linear(inputs, weights, bias); }

                    [5541,-250]

```

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Last updated1 month ago