nn.softplus

```
Copy fnsoftplus(tensor:@Tensor)->Tensor;
```

Applies the Softplus function to an n-dimensional input Tensor such that the elements of the n-dimensional output Tensor lie in the range [-1,1].

! softplus (x i) = l o g (1 + e x i) $\text{softplus}(x_i) = log({1 + e^{x_i}})$

Args

- tensor
- (@Tensor
-) - The input tensor.
-

Returns

A Tensor of fixed point numbers with the same shape than the input Tensor.

Type Constraints

Constrain input and output types to fixed point tensors.

Examples

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

useorion::operators::tensor::{TensorTrait,Tensor,FP8x23}; useorion::operators::nn::{NNTrait,FP8x23NN}; useorion::numbers::{FP8x23,FixedTrait};

fnsoftplus_example()->Tensor { lettensor=TensorTrait::::new( shape:array![2,2].span(), data:array![ FixedTrait::new(0,false), FixedTrait::new(1,false), FixedTrait::new(2,false), FixedTrait::new(3,false), ] .span(), );

returnNNTrait::softplus(@tensor); }

                [[5814540,11016447],[17841964,25573406]] // The fixed point representation of //
                [[0.6931452, 1.31326096],[2.12692796, 3.04858728]]
```

Last updated3 months ago