tensor.qlinear_leakyrelu

```

Copy fnqlinear_leakyrelu(self:@Tensor, a_scale:@Tensor, a_zero_point:@Tensor, alpha:T)->Tensor::;

```

Applies the Leaky Relu operator to a quantized Tensor

QLinar LeakyRelu takes as input a quantized Tensor, its scale and zero point and an scalar alpha, and produces one output data (a quantized Tensor) where the functionf(x) = alpha * x for x < 0, f(x) = x for x >= 0 , is applied to the data tensor elementwise. The quantization formula is y = saturate((x / y_scale) + y_zero_point). Scale and zero point must have same shape and the same type. They must be either scalar (per tensor) or N-D tensor (per row for 'a' and per column for 'b'). Scalar refers to per tensor quantization whereas N-D refers to per row or per column quantization.

Args

- self
- (@Tensor
-) - The first tensor to be multiplied (a).
- a_scale
- (@Tensor
-) - Scale for inputa
- .
- a_zero_point
- (@Tensor
-) - Zero point for inputa
- .
- alpha
- (T
-) - The factor multiplied to negative elements.
-

Returns

A newTensor , containing result of the Leaky Relu.

Type Constraints

u32 tensor, not supported. fp8x23wide tensor, not supported. fp16x16wide tensor, not supported. bool tensor, not supported.

Example

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Copy

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

useorion::operators::tensor::{TensorTrait,Tensor,I8Tensor,FP16x16Tensor}; useorion::numbers::
{FP16x16,FP16x16Impl,FixedTrait};

fnqlinear_leakyrelu_example()->Tensor { leta=TensorTrait::< i8

    ::new( shape:array![2,3].span(), data:array![ -10, -10, -10, 10, 10, 10 ] .span(), );

leta_scale=TensorTrait::< FP16x16

    ::new(shape:array![1].span(), data:array![FixedTrait:::new(327680,false)].span(),); leta_zero_point=TensorTrait::
    < FP16x16 ::new(shape:array![1].span(), data:array![FixedTrait::::new(131072,false)].span(),);

letalpha=FixedTrait::::new(655360,false);

return=a .qlinear_leakyrelu( @a_scale,@a_zero_point, alpha ); }

                    [[-118,-118,-118], [10,10,10]]

```

Previous tensor.qlinear_concat Next tensor.nonzero

Last updated1 month ago