

tensor.qlinear_concat

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Copy qlinear_concat(tensors:Span>, scales:Span>, zero_points:Span>, y_scale:@Tensor, y_zero_point:@Tensor, axis:usize)->Tensor::;

...

Concatenate a list of tensors after dequantizing them with their respective scales and zero_points and returns the quantized result.

Args

- tensors
- (Span>,
•) - Array of the quantized input tensors.
- scales
- (Span>,
•) - Array of the scales of the quantized input tensors.
- zero_points
- (Span>,
•) - Array of the zero_points of the quantized input tensors.
- y_scale
- (@Tensor
•) - Scale for output.
- y_zero_point
- (@Tensor
•) - Zero point for output.
- axis
- (usize
•) - Axis to concat on.
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Panics

- Panic if tensor length is not greater than 1.
- Panics if dimension is not greater than axis.
-

Type Constraints

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

Returns

A newTensor concatenated quantized tensor of the dequantized input tensors.

Example

...

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

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

fnqlinear_concat_example()->Tensor { lettensor1=TensorTrait::< i8

::new(shape:array![2,2].span(), data:array![5, 5, 5, 5,] .span(),); lettensor2=TensorTrait::< i8 ::new(
shape:array![2,2].span(), data:array![1, 1, 1, 1,] .span(),);

letensors=array![tensor1, tensor2].span();

lettensor1_scale=TensorTrait::< FP16x16

::new(shape:array![1].span(), data:array![FixedTrait:::new(131072,false)].span(),); lettensor2_scale=TensorTrait::
< FP16x16 ::new(shape:array![1].span(), data:array![FixedTrait:::new(262144,false)].span(),);

letscales=array![tensor1_scale, tensor2_scale].span();

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let tensor1_zero_point=TensorTrait::< FP16x16
    ::new(shape:array![1].span(), data:array![FixedTrait:::new(327680,false)].span(),);
let tensor2_zero_point=TensorTrait::< FP16x16 ::new(shape:array![1].span(), data:array!
[FixedTrait:::new(0,false)].span(),);

let zero_points=array![tensor1_zero_point, tensor2_zero_point].span();

let y_scale=TensorTrait::< FP16x16
    ::new(shape:array![1].span(), data:array![FixedTrait:::new(262144,false)].span(),);

let y_zero_point=TensorTrait::< FP16x16
    ::new(shape:array![1].span(), data:array![FixedTrait:::new(65536,false)].span(),);

return TensorTrait::qlinear_concat(tensors, scales, zero_points,@y_scale,@y_zero_point,0); }

[[1,1,1,1], [2,2,2,2]]

...

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[Previous tensor.qlinear_matmul](#) [Next tensor.qlinear_leakyrelu](#)

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