

tf.contrib.kfac.fisher_blocks.ConvKFCBasicFB

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Class ConvKFCBasicFB

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`__init__``full_fisher_block`Class **ConvKFCBasicFB**Inherits From: [KroneckerProductFB](#)Defined in [tensorflow/contrib/kfac/python/ops/fisher_blocks.py](#).

FisherBlock for 2D convolutional layers using the basic KFC approx.

See <https://arxiv.org/abs/1602.01407> for details.

Methods

`__init__`

```
__init__(  
    layer_collection,  
    params,  
    inputs,  
    outputs,  
    strides,  
    padding  
)
```

Creates a ConvKFCBasicFB block.

Args:

- `layer_collection`: The collection of all layers in the K-FAC approximate Fisher information matrix to which this FisherBlock belongs.
- `params`: The parameters (Tensor or tuple of Tensors) of this layer. If kernel alone, a Tensor of shape [kernel_height, kernel_width, in_channels, out_channels]. If kernel and bias, a tuple of 2 elements containing the previous and a Tensor of shape [out_channels].
- `inputs`: A Tensor of shape [batch_size, height, width, in_channels]. Input activations to this layer.
- `outputs`: A Tensor of shape [batch_size, height, width, out_channels]. Output pre-activations from this layer.
- `strides`: The stride size in this layer (1-D Tensor of length 4).
- `padding`: The padding in this layer (1-D of Tensor length 4).

full_fisher_block

```
full_fisher_block()
```

Explicitly constructs the full Fisher block.

Used for testing purposes. (In general, the result may be very large.)

Returns:

The full Fisher block.

instantiate_factors

```
instantiate_factors(  
    grads_list,  
    damping  
)
```

multiply

```
multiply(vector)
```

multiply_inverse

```
multiply_inverse(vector)
```

tensors_to_compute_grads

```
tensors_to_compute_grads()
```

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