tf.contrib.kfac.fisher_blocks.ConvDiagonalFB

Contents

Class **ConvDiagonalFB**

Inherits From: `FisherBlock`

Defined in `tensorflow/contrib/kfac/python/ops/fisher_blocks.py`.

FisherBlock for convolutional layers using a diagonal approx.

Unlike NaiveDiagonalFB this uses the low-variance "sum of squares" estimator.

Methods

`__init__`

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

Creates a ConvDiagonalFB 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).

instantiate_factors

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

multiply

```
multiply(vector)
```

multiply_inverse

```
multiply_inverse(vector)
```

tensors_to_compute_grads

```
tensors_to_compute_grads()
```

Last updated November 2, 2017.