

tf.contrib.kfac.fisher_factors.FullyConnectedKroneckerFactor

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Class **FullyConnectedKroneckerFactor**

Inherits From: [InverseProvidingFactor](#)Defined in [tensorflow/contrib/kfac/python/ops/fisher_factors.py](#).

Kronecker factor for the input or output side of a fully-connected layer.

Methods

`__init__`

```
__init__(  
    tensors,  
    has_bias=False  
)
```

`get_cov`

```
get_cov()
```

`get_eigendecomp`

```
get_eigendecomp()
```

`get_inverse`

```
get_inverse(damping)
```

`get_matpower`

```
get_matpower(  
    exp,  
    damping  
)
```

instantiate_covariance

```
instantiate_covariance()
```

Instantiates the covariance Variable as the instance member `_cov`.

make_covariance_update_op

```
make_covariance_update_op(ema_decay)
```

Constructs and returns the covariance update Op.

Args:

- `ema_decay` : The exponential moving average decay (float or Tensor).

Returns:

An Op for updating the covariance Variable referenced by `_cov`.

make_inverse_update_ops

```
make_inverse_update_ops()
```

Create and return update ops corresponding to registered computations.

register_damped_inverse

```
register_damped_inverse(damping)
```

Registers a damped inverse needed by a FisherBlock.

Args:

- `damping` : The damping value (float or Tensor) for this factor.

register_eigendecomp

```
register_eigendecomp()
```

Registers that an eigendecomposition is needed by a FisherBlock.

register_matpower

```
register_matpower(  
    exp,  
    damping  
)
```

Registers a matrix power needed by a FisherBlock.

Args:

- `exp` : The exponent (float or Tensor) to raise the matrix to.
- `damping` : The damping value (float or Tensor).

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