# tf.contrib.kfac.loss_functions.MultiBernoulliNegativeLogProbLoss

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## Class `MultiBernoulliNegativeLogProbLoss`

Inherits From: `DistributionNegativeLogProbLoss`, `NaturalParamsNegativeLogProbLoss`

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

Neg log prob loss for multiple Bernoulli distributions param'd by logits.

Represents N independent Bernoulli distributions where N = len(logits). Its Fisher Information matrix is given by,

F = diag(p * (1-p)) p = sigmoid(logits)

As F is diagonal with positive entries, its factor B is,

B = diag(sqrt(p * (1-p)))

## Properties

### `fisher_factor_inner_shape`

### `fisher_factor_inner_static_shape`

### `hessian_factor_inner_shape`

### `hessian_factor_inner_static_shape`

### `inputs`

### `params`

## Methods

### `__init__`

```
__init__(
    logits,
    targets=None,
    seed=None
)
```

### evaluate

```
evaluate()
```

Evaluate the loss function.

### evaluate_on_sample

```
evaluate_on_sample(seed=None)
```

### multiply_fisher

```
multiply_fisher(vector)
```

### multiply_fisher_factor

```
multiply_fisher_factor(vector)
```

### multiply_fisher_factor_replicated_one_hot

```
multiply_fisher_factor_replicated_one_hot(index)
```

### multiply_fisher_factor_transpose

```
multiply_fisher_factor_transpose(vector)
```

### multiply_hessian

```
multiply_hessian(vector)
```

### multiply_hessian_factor

```
multiply_hessian_factor(vector)
```

### multiply_hessian_factor_replicated_one_hot

```
multiply_hessian_factor_replicated_one_hot(index)
```

### multiply_hessian_factor_transpose

```
multiply_hessian_factor_transpose(vector)
```

### sample

```
sample(seed)
```

*Last updated November 2, 2017.*