

# tf.contrib.bayesflow.stochastic\_tensor.ObservedStochasticTensor

## Contents

Class `ObservedStochasticTensor`

## Properties

`distribution`

`dtype`

## Class `ObservedStochasticTensor`

Inherits From: `StochasticTensor`

Defined in `tensorflow/contrib/bayesflow/python/ops/stochastic_tensor_impl.py`.

A `StochasticTensor` with an observed value.

## Properties

**`distribution`**

**`dtype`**

**`graph`**

**`name`**

**`value_type`**

## Methods

### `__init__`

```
__init__(  
    dist,  
    value,  
    name=None  
)
```

Construct an `ObservedStochasticTensor`.

`ObservedStochasticTensor` is backed by distribution `dist` and uses the provided value instead of using the current value type to draw a value from the distribution. The provided value argument must be appropriately shaped to have come from the distribution.

Args:

- `dist` : an instance of `Distribution` .
- `value` : a Tensor containing the observed value
- `name` : a name for this `ObservedStochasticTensor` and its ops.

Raises:

- `TypeError` : if `dist` is not an instance of `Distribution` .
- `ValueError` : if `value` is not compatible with the distribution.

## entropy

```
entropy(name='entropy')
```

## loss

```
loss(  
    final_loss,  
    name=None  
)
```

## mean

```
mean(name='mean')
```

## value

```
value(name='value')
```

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Last updated November 2, 2017.

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