

tf.contrib.bayesflow.stochastic_tensor.SampleValue

Contents

Class SampleValue

Properties

shape

stop_gradient

Class **SampleValue**

Defined in [tensorflow/contrib/bayesflow/python/ops/stochastic_tensor_impl.py](#).

See the guide: [BayesFlow Stochastic Tensors \(contrib\)](#) > [Stochastic Tensor Value Types](#)

Draw samples, possibly adding new outer dimensions along the way.

This ValueType draws samples from StochasticTensors run within its context, increasing the rank according to the requested shape.

Examples:

```
mu = tf.zeros((2,3))
sigma = tf.ones((2, 3))
with sg.value_type(sg.SampleValue()):
    st = sg.StochasticTensor(
        tf.contrib.distributions.Normal, mu=mu, sigma=sigma)
# draws 1 sample and does not reshape
assertEqual(st.value().get_shape(), (2, 3))
```

```
mu = tf.zeros((2,3))
sigma = tf.ones((2, 3))
with sg.value_type(sg.SampleValue(4)):
    st = sg.StochasticTensor(
        tf.contrib.distributions.Normal, mu=mu, sigma=sigma)
# draws 4 samples each with shape (2, 3) and concatenates
assertEqual(st.value().get_shape(), (4, 2, 3))
```

Properties

shape**stop_gradient**

Methods

__init__

```
__init__(
    shape=(),
    stop_gradient=False
)
```

Sample according to shape.

For the given StochasticTensor `st` using this value type, the shape of `st.value()` will match that of `st.distribution.sample(shape)`.

Args:

- `shape`: A shape tuple or int32 tensor. The sample shape. Default is a scalar: take one sample and do not change the size.
- `stop_gradient`: If `True`, StochasticTensors' values are wrapped in `stop_gradient`, to avoid backpropagation through.

declare_inputs

```
declare_inputs(
    unused_stochastic_tensor,
    unused_inputs_dict
)
```

popped_above

```
popped_above(unused_value_type)
```

pushed_above

```
pushed_above(unused_value_type)
```

Except as otherwise noted, the content of this page is licensed under the [Creative Commons Attribution 3.0 License](#), and code samples are licensed under the [Apache 2.0 License](#). For details, see our [Site Policies](#). Java is a registered trademark of Oracle and/or its affiliates.

Last updated November 2, 2017.

Stay Connected

[Blog](#)

[GitHub](#)

[Twitter](#)

Support

[Issue Tracker](#)

[Release Notes](#)

[Stack Overflow](#)

