

## tf.contrib.bayesflow.stochastic\_graph.surrogate\_loss

```
surrogate_loss(  
    sample_losses,  
    stochastic_tensors=None,  
    name='SurrogateLoss'  
)
```

Defined in [tensorflow/contrib/bayesflow/python/ops/stochastic\\_graph\\_impl.py](#).

See the guide: [BayesFlow Stochastic Graph \(contrib\) > Stochastic Computation Graph Helper Functions](#)

Surrogate loss for stochastic graphs.

This function will call `loss_fn` on each `StochasticTensor` upstream of `sample_losses`, passing the losses that it influenced.

Note that currently `surrogate_loss` does not work with `StochasticTensor` s instantiated in `while_loop` s or other control structures.

#### Args:

- `sample_losses`: a list or tuple of final losses. Each loss should be per example in the batch (and possibly per sample); that is, it should have dimensionality of 1 or greater. All losses should have the same shape.
- `stochastic_tensors`: a list of `StochasticTensor` s to add loss terms for. If None, defaults to all `StochasticTensor` s in the graph upstream of the `Tensor` s in `sample_losses`.
- `name`: the name with which to prepend created ops.

#### Returns:

`Tensor` loss, which is the sum of `sample_losses` and the `loss_fn` s returned by the `StochasticTensor` s.

#### Raises:

- `TypeError`: if `sample_losses` is not a list or tuple, or if its elements are not `Tensor` s.
- `ValueError`: if any loss in `sample_losses` does not have dimensionality 1 or greater.

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