

## tf.contrib.bayesflow.metropolis\_hastings.uniform\_random\_proposal

```
uniform_random_proposal(  
    step_size=1.0,  
    seed=None,  
    name=None  
)
```

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

Returns a callable that adds a random uniform tensor to the input.

This function returns a callable that accepts one **Tensor** argument of any shape and a real data type (i.e. **tf.float32** or **tf.float64**). It adds a sample from a random uniform distribution drawn from  $[-\text{step\_size}, \text{step\_size}]$  to its input. It also returns the log of the ratio of the probability of moving from the input point to the proposed point, but since this log ratio is identically equal to 0 (because the probability of drawing a value  $x$  from the symmetric uniform distribution is the same as the probability of drawing  $-x$ ), it simply returns None for the second element of the returned tuple.

### Args:

- **step\_size**: A positive **float** or a scalar tensor of real dtype controlling the scale of the uniform distribution. If  $\text{step\_size} = a$ , then draws are made uniformly from  $[-a, a]$ .
- **seed**: **int** or None. The random seed for this **Op**. If **None**, no seed is applied.
- **name**: A string that sets the name for this **Op**.

### Returns:

- **proposal\_fn**: A callable accepting one float-like **Tensor** and returning a 2-tuple. The first value in the tuple is a **Tensor** of the same shape and dtype as the input argument and the second element of the tuple is None.

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