

## tf.contrib.nn.alpha\_dropout

```
alpha_dropout(  
    x,  
    keep_prob,  
    noise_shape=None,  
    seed=None,  
    name=None  
)
```

Defined in [tensorflow/contrib/nn/python/ops/alpha\\_dropout.py](#).

Computes alpha dropout.

Alpha Dropout is a dropout that maintains the self-normalizing property. For an input with zero mean and unit standard deviation, the output of Alpha Dropout maintains the original mean and standard deviation of the input.

See [Self-Normalizing Neural Networks](#)

### Args:

- **x**: A tensor.
- **keep\_prob**: A scalar **Tensor** with the same type as x. The probability that each element is kept.
- **noise\_shape**: A 1-D **Tensor** of type **int32**, representing the shape for randomly generated keep/drop flags.
- **seed**: A Python integer. Used to create random seeds. See [tf.set\\_random\\_seed](#) for behavior.
- **name**: A name for this operation (optional).

### Returns:

A Tensor of the same shape of **x**.

### Raises:

- **ValueError**: If **keep\_prob** is not in **(0, 1]**.

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