

## tf.distributions.RegisterKL

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## Aliases:

- Class `tf.contrib.distributions.RegisterKL`
- Class `tf.distributions.RegisterKL`

Defined in `tensorflow/python/ops/distributions/kullback_leibler.py`.See the guide: [Statistical Distributions \(contrib\) > Kullback-Leibler Divergence](#)

Decorator to register a KL divergence implementation function.

## Usage:

```
@distributions.RegisterKL(distributions.Normal, distributions.Normal) def _kl_normal_mvn(norm_a, norm_b): # Return KL(norm_a || norm_b)
```

## Methods

**`__init__`**

```
__init__(  
    dist_cls_a,  
    dist_cls_b  
)
```

Initialize the KL registrar.

## Args:

- `dist_cls_a`: the class of the first argument of the KL divergence.
- `dist_cls_b`: the class of the second argument of the KL divergence.

**`__call__`**

```
__call__(kl_fn)
```

Perform the KL registration.

Args:

- `kl_fn` : The function to use for the KL divergence.

Returns:

`kl_fn`

Raises:

- `TypeError` : if `kl_fn` is not a callable.
- `ValueError` : if a KL divergence function has already been registered for the given argument classes.

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