

tf.contrib.losses.sparse_softmax_cross_entropy

```
sparse_softmax_cross_entropy(  
    logits,  
    labels,  
    weights=1.0,  
    scope=None  
)
```

Defined in [tensorflow/contrib/losses/python/losses/loss_ops.py](#).

See the guide: [Losses \(contrib\)](#) > Loss operations for use in neural networks.

Cross-entropy loss using `tf.nn.sparse_softmax_cross_entropy_with_logits`. (deprecated)

THIS FUNCTION IS DEPRECATED. It will be removed after 2016-12-30. Instructions for updating: Use `tf.losses.sparse_softmax_cross_entropy` instead. Note that the order of the logits and labels arguments has been changed.

`weights` acts as a coefficient for the loss. If a scalar is provided, then the loss is simply scaled by the given value. If `weights` is a tensor of size `[batch_size]`, then the loss weights apply to each corresponding sample.

Args:

- `logits`: `[batch_size, num_classes]` logits outputs of the network.
- `labels`: `[batch_size, 1]` or `[batch_size]` labels of dtype `int32` or `int64` in the range `[0, num_classes)`.
- `weights`: Coefficients for the loss. The tensor must be a scalar or a tensor of shape `[batch_size]` or `[batch_size, 1]`.
- `scope`: the scope for the operations performed in computing the loss.

Returns:

A scalar `Tensor` representing the mean loss value.

Raises:

- `ValueError`: If the shapes of `logits`, `labels`, and `weights` are incompatible, or if `weights` is `None`.

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