

## tf.contrib.nn.deprecated\_flipped\_softmax\_cross\_entropy\_with\_logits

```
deprecated_flipped_softmax_cross_entropy_with_logits(  
    logits,  
    labels,  
    dim=-1,  
    name=None  
)
```

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

Computes softmax cross entropy between `logits` and `labels`.

This function differs from `tf.nn.softmax_cross_entropy_with_logits` only in the argument order.

Measures the probability error in discrete classification tasks in which the classes are mutually exclusive (each entry is in exactly one class). For example, each CIFAR-10 image is labeled with one and only one label: an image can be a dog or a truck, but not both.

**NOTE:** While the classes are mutually exclusive, their probabilities need not be. All that is required is that each row of `labels` is a valid probability distribution. If they are not, the computation of the gradient will be incorrect.

If using exclusive `labels` (wherein one and only one class is true at a time), see `sparse_softmax_cross_entropy_with_logits`.

**WARNING:** This op expects unscaled logits, since it performs a `softmax` on `logits` internally for efficiency. Do not call this op with the output of `softmax`, as it will produce incorrect results.

`logits` and `labels` must have the same shape `[batch_size, num_classes]` and the same dtype (either `float16`, `float32`, or `float64`).

#### Args:

- `logits`: Unscaled log probabilities.
- `labels`: Each row `labels[i]` must be a valid probability distribution.
- `dim`: The class dimension. Defaulted to -1 which is the last dimension.
- `name`: A name for the operation (optional).

#### Returns:

A 1-D `Tensor` of length `batch_size` of the same type as `logits` with the softmax cross entropy loss.

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