tf.contrib.seq2seq.sequence_loss

```
sequence_loss(
    logits,
    targets,
    weights,
    average_across_timesteps=True,
    average_across_batch=True,
    softmax_loss_function=None,
    name=None
)
```

Defined in `tensorflow/contrib/seq2seq/python/ops/loss.py`.

Weighted cross-entropy loss for a sequence of logits.

Depending on the values of `average_across_timesteps` and `average_across_batch`, the return Tensor will have rank 0, 1, or 2 as these arguments reduce the cross-entropy at each target, which has shape `[batch_size, sequence_length]`, over their respective dimensions. For example, if `average_across_timesteps` is `True` and `average_across_batch` is `False`, then the return Tensor will have shape `[batch_size]`.

Args:

- `logits`: A Tensor of shape `[batch_size, sequence_length, num_decoder_symbols]` and dtype float. The logits correspond to the prediction across all classes at each timestep.
- `targets`: A Tensor of shape `[batch_size, sequence_length]` and dtype int. The target represents the true class at each timestep.
- `weights`: A Tensor of shape `[batch_size, sequence_length]` and dtype float. `weights` constitutes the weighting of each prediction in the sequence. When using `weights` as masking, set all valid timesteps to 1 and all padded timesteps to 0, e.g. a mask returned by `tf.sequence_mask`.
- `average_across_timesteps`: If set, sum the cost across the sequence dimension and divide the cost by the total label weight across timesteps.
- `average_across_batch`: If set, sum the cost across the batch dimension and divide the returned cost by the batch size.
- `softmax_loss_function`: Function (labels, logits) -> loss-batch to be used instead of the standard softmax (the default if this is None). **Note that to avoid confusion, it is required for the function to accept named arguments.**
- `name`: Optional name for this operation, defaults to "sequence_loss".

Returns:

A float Tensor of rank 0, 1, or 2 depending on the `average_across_timesteps` and `average_across_batch` arguments. By default, it has rank 0 (scalar) and is the weighted average cross-entropy (log-perplexity) per symbol.

Raises:

- `ValueError`: logits does not have 3 dimensions or targets does not have 2 dimensions or weights does not have 2 dimensions.

Last updated November 2, 2017.