

## tf.nn.ctc\_greedy\_decoder

```
ctc_greedy_decoder(  
    inputs,  
    sequence_length,  
    merge_repeated=True  
)
```

Defined in [tensorflow/python/ops/ctc\\_ops.py](#).

See the guide: [Neural Network > Connectionist Temporal Classification \(CTC\)](#)

Performs greedy decoding on the logits given in input (best path).

★ **Note:** Regardless of the value of `merge_repeated`, if the maximum index of a given time and batch corresponds to the blank index (`num_classes - 1`), no new element is emitted.

If `merge_repeated` is `True`, merge repeated classes in output. This means that if consecutive logits' maximum indices are the same, only the first of these is emitted. The sequence `A B B * B * B` (where '\*' is the blank label) becomes

- `A B B B` if `merge_repeated=True`.
- `A B B B B` if `merge_repeated=False`.

### Args:

- `inputs`: 3-D `float Tensor` sized `[max_time x batch_size x num_classes]`. The logits.
- `sequence_length`: 1-D `int32` vector containing sequence lengths, having size `[batch_size]`.
- `merge_repeated`: Boolean. Default: `True`.

### Returns:

A tuple `(decoded, neg_sum_logits)` where `decoded`: A single-element list. `decoded[0]` is an `SparseTensor` containing the decoded outputs s.t.:

`decoded.indices`: Indices matrix `(total_decoded_outputs x 2)`. The rows store: `[batch, time]`.

`decoded.values`: Values vector, size `(total_decoded_outputs)`. The vector stores the decoded classes.

`decoded.shape`: Shape vector, size `(2)`. The shape values are: `[batch_size, max_decoded_length]` `neg_sum_logits`: A `float` matrix `(batch_size x 1)` containing, for the sequence found, the negative of the sum of the greatest logit at each timeframe.

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