

tf.contrib.seq2seq.rnn_decoder

```
rnn_decoder(  
    decoder_inputs,  
    initial_state,  
    cell,  
    loop_function=None,  
    scope=None  
)
```

Defined in [tensorflow/contrib/legacy_seq2seq/python/ops/seq2seq.py](#).

RNN decoder for the sequence-to-sequence model.

Args:

- `decoder_inputs`: A list of 2D Tensors [batch_size x input_size].
- `initial_state`: 2D Tensor with shape [batch_size x cell.state_size].
- `cell`: `rnn_cell.RNNCell` defining the cell function and size.
- `loop_function`: If not None, this function will be applied to the i-th output in order to generate the i+1-st input, and `decoder_inputs` will be ignored, except for the first element ("GO" symbol). This can be used for decoding, but also for training to emulate <http://arxiv.org/abs/1506.03099>. Signature – `loop_function(prev, i) = next`
 - `prev` is a 2D Tensor of shape [batch_size x output_size],
 - `i` is an integer, the step number (when advanced control is needed),
 - `next` is a 2D Tensor of shape [batch_size x input_size].
- `scope`: `VariableScope` for the created subgraph; defaults to "rnn_decoder".

Returns:

A tuple of the form (outputs, state), where: `outputs`: A list of the same length as `decoder_inputs` of 2D Tensors with shape [batch_size x output_size] containing generated outputs. `state`: The state of each cell at the final time-step. It is a 2D Tensor of shape [batch_size x cell.state_size]. (Note that in some cases, like basic RNN cell or GRU cell, outputs and states can be the same. They are different for LSTM cells though.)

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