tf.contrib.seq2seq.Decoder

Class **`Decoder`**

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

See the guide: Seq2seq Library (contrib) > Dynamic Decoding

An RNN Decoder abstract interface object.

Concepts used by this interface: - `inputs`: (structure of) tensors and TensorArrays that is passed as input to the RNNCell composing the decoder, at each time step. - `state`: (structure of) tensors and TensorArrays that is passed to the RNNCell instance as the state. - `finished`: boolean tensor telling whether each sequence in the batch is finished. - `outputs`: Instance of BasicDecoderOutput. Result of the decoding, at each time step.

Properties

`batch_size`

The batch size of input values.

`output_dtype`

A (possibly nested tuple of...) dtype[s].

`output_size`

A (possibly nested tuple of...) integer[s] or `TensorShape` object[s].

Methods

`finalize`

```
finalize(
    outputs,
    final_state,
    sequence_lengths
)
```

`initialize`

```
initialize(name=None)
```

Called before any decoding iterations.

This methods must compute initial input values and initial state.

Args:

- `name` : Name scope for any created operations.

Returns:

`(finished, initial_inputs, initial_state)` : initial values of 'finished' flags, inputs and state.

`step`

```
step(
    time,
    inputs,
    state,
    name=None
)
```

Called per step of decoding (but only once for dynamic decoding).

Args:

- `time` : Scalar `int32` tensor. Current step number.
- `inputs` : RNNCell input (possibly nested tuple of) tensor[s] for this time step.
- `state` : RNNCell state (possibly nested tuple of) tensor[s] from previous time step.
- `name` : Name scope for any created operations.

Returns:

`(outputs, next_state, next_inputs, finished)` : **`outputs`** is an object containing the decoder output, **`next_state`** is a (structure of) state tensors and TensorArrays, **`next_inputs`** is the tensor that should be used as input for the next step, **`finished`** is a boolean tensor telling whether the sequence is complete, for each sequence in the batch.

Last updated November 2, 2017.