# pylint: disable=no-member

"""

Implementing a base layer for twml

"""

import tensorflow.compat.v1 as tf

from tensorflow.python.layers import base

class Layer(base.Layer):

"""

Base Layer implementation for twml.

Overloads `twml.layers.Layer

<https://www.tensorflow.org/versions/master/api\_docs/python/tf/layers/Layer>`\_

from tensorflow and adds a couple of custom methods.

"""

@property

def init(self):

"""

Return initializer ops. By default returns tf.no\_op().

This method is overwritten by classes like twml.layers.MDL, which

uses a HashTable internally, that must be initialized with its own op.

"""

return tf.no\_op()

def call(self, inputs, \*\*kwargs):

"""The logic of the layer lives here.

Arguments:

inputs:

input tensor(s).

\*\*kwargs:

additional keyword arguments.

Returns:

Output tensor(s).

"""

raise NotImplementedError

def compute\_output\_shape(self, input\_shape):

"""Computes the output shape of the layer given the input shape.

Args:

input\_shape: A (possibly nested tuple of) `TensorShape`. It need not

be fully defined (e.g. the batch size may be unknown).

Raise NotImplementedError.

"""

raise NotImplementedError