

Module: tf.layers

[Contents](#)[Classes](#)[Functions](#)

Defined in [tensorflow/python/layers/layers.py](#).

This library provides a set of high-level neural networks layers.

Classes

class [AveragePooling1D](#) : Average Pooling layer for 1D inputs.

class [AveragePooling2D](#) : Average pooling layer for 2D inputs (e.g. images).

class [AveragePooling3D](#) : Average pooling layer for 3D inputs (e.g. volumes).

class [BatchNormalization](#) : Batch Normalization layer from <http://arxiv.org/abs/1502.03167>.

class [Conv1D](#) : 1D convolution layer (e.g. temporal convolution).

class [Conv2D](#) : 2D convolution layer (e.g. spatial convolution over images).

class [Conv2DTranspose](#) : Transposed 2D convolution layer (sometimes called 2D Deconvolution).

class [Conv3D](#) : 3D convolution layer (e.g. spatial convolution over volumes).

class [Conv3DTranspose](#) : Transposed 3D convolution layer (sometimes called 3D Deconvolution).

class [Dense](#) : Densely-connected layer class.

class [Dropout](#) : Applies Dropout to the input.

class [Flatten](#) : Flattens an input tensor while preserving the batch axis (axis 0).

class [InputSpec](#) : Specifies the ndim, dtype and shape of every input to a layer.

class [Layer](#) : Base layer class.

class [MaxPooling1D](#) : Max Pooling layer for 1D inputs.

class [MaxPooling2D](#) : Max pooling layer for 2D inputs (e.g. images).

class [MaxPooling3D](#) : Max pooling layer for 3D inputs (e.g. volumes).

class [SeparableConv2D](#) : Depthwise separable 2D convolution.

Functions

Input(...) : **Input()** is used to instantiate an input tensor for use with a **Network**.

average_pooling1d(...) : Average Pooling layer for 1D inputs.

`average_pooling2d(...)` : Average pooling layer for 2D inputs (e.g. images).

`average_pooling3d(...)` : Average pooling layer for 3D inputs (e.g. volumes).

`batch_normalization(...)` : Functional interface for the batch normalization layer.

`conv1d(...)` : Functional interface for 1D convolution layer (e.g. temporal convolution).

`conv2d(...)` : Functional interface for the 2D convolution layer.

`conv2d_transpose(...)` : Functional interface for transposed 2D convolution layer.

`conv3d(...)` : Functional interface for the 3D convolution layer.

`conv3d_transpose(...)` : Functional interface for transposed 3D convolution layer.

`dense(...)` : Functional interface for the densely-connected layer.

`dropout(...)` : Applies Dropout to the input.

`flatten(...)` : Flattens an input tensor while preserving the batch axis (axis 0).

`max_pooling1d(...)` : Max Pooling layer for 1D inputs.

`max_pooling2d(...)` : Max pooling layer for 2D inputs (e.g. images).

`max_pooling3d(...)` : Max pooling layer for 3D inputs (e.g. volumes).

`separable_conv2d(...)` : Functional interface for the depthwise separable 2D convolution layer.

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Last updated November 2, 2017.

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