

tf.keras.applications.InceptionV3

Contents

Aliases:

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- `tf.keras.applications.InceptionV3`
- `tf.keras.applications.inception_v3.InceptionV3`

```
InceptionV3(  
    include_top=True,  
    weights='imagenet',  
    input_tensor=None,  
    input_shape=None,  
    pooling=None,  
    classes=1000  
)
```

Defined in [tensorflow/python/keras/_impl/keras/applications/inception_v3.py](#).

Instantiates the Inception v3 architecture.

Optionally loads weights pre-trained on ImageNet. Note that when using TensorFlow, for best performance you should set `image_data_format="channels_last"` in your Keras config at `~/.keras/keras.json`. The model and the weights are compatible with both TensorFlow and Theano. The data format convention used by the model is the one specified in your Keras config file. Note that the default input image size for this model is 299x299.

Arguments:

- `include_top`: whether to include the fully-connected layer at the top of the network.
- `weights`: one of `None` (random initialization) or "imagenet" (pre-training on ImageNet).
- `input_tensor`: optional Keras tensor (i.e. output of `layers.Input()`) to use as image input for the model.
- `input_shape`: optional shape tuple, only to be specified if `include_top` is `False` (otherwise the input shape has to be `(299, 299, 3)` (with `channels_last` data format) or `(3, 299, 299)` (with `channels_first` data format). It should have exactly 3 input channels, and width and height should be no smaller than 139. E.g. `(150, 150, 3)` would be one valid value.
- `pooling`: Optional pooling mode for feature extraction when `include_top` is `False`. - `None` means that the output of the model will be the 4D tensor output of the last convolutional layer. - `avg` means that global average pooling will be applied to the output of the last convolutional layer, and thus the output of the model will be a 2D tensor. - `max` means that global max pooling will be applied.
- `classes`: optional number of classes to classify images into, only to be specified if `include_top` is `True`, and if no `weights` argument is specified.

Returns:

A Keras model instance.

Raises:

- `ValueError` : in case of invalid argument for `weights` , or invalid input shape.

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