tf.keras.Input

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> Aliases:

Aliases:

- `tf.keras.Input`
- `tf.keras.layers.Input`

```
Input(
    shape=None,
    batch_size=None,
    name=None,
    dtype=None,
    sparse=False,
    tensor=None,
    **kwargs
)
```

Defined in `tensorflow/python/keras/_impl/keras/engine/topology.py`.

`Input()` is used to instantiate a Keras tensor.

A Keras tensor is a tensor object from the underlying backend (Theano or TensorFlow), which we augment with certain attributes that allow us to build a Keras model just by knowing the inputs and outputs of the model.

For instance, if a, b and c are Keras tensors, it becomes possible to do: `model = Model(input=[a, b], output=c)`

The added Keras attribute is: `_keras_history` : Last layer applied to the tensor. the entire layer graph is retrievable from that layer, recursively.

Arguments:

- `shape` : A shape tuple (integers), not including the batch size. For instance, `shape=(32,)` indicates that the expected input will be batches of 32-dimensional vectors.
- `batch_size` : optional static batch size (integer).
- `name` : An optional name string for the layer. Should be unique in a model (do not reuse the same name twice). It will be autogenerated if it isn't provided.
- `dtype` : The data type expected by the input, as a string (`float32` , `float64` , `int32` ...)
- `sparse` : A boolean specifying whether the placeholder to be created is sparse.
- `tensor` : Optional existing tensor to wrap into the `Input` layer. If set, the layer will not create a placeholder tensor.
- `**kwargs` : deprecated arguments support.

Returns:

```
A tensor.
```

Example:

```python
# this is a logistic regression in Keras
x = Input(shape=(32,))
y = Dense(16, activation='softmax')(x)
model = Model(x, y)
```

Raises:

- `ValueError` : in case of invalid arguments.

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