TensorFlow   API r1.4

tf.spectral.rfft2d

```
rfft2d(
    input_tensor,
    fft_length=None,
    name=None
)
```

Defined in `tensorflow/python/ops/spectral_ops.py`.

See the guide: Spectral Functions > Discrete Fourier Transforms

2D real-valued fast Fourier transform.

Computes the 2-dimensional discrete Fourier transform of a real-valued signal over the inner-most 2 dimensions of `input`.

Since the DFT of a real signal is Hermitian-symmetric, `RFFT2D` only returns the `fft_length / 2 + 1` unique components of the FFT for the inner-most dimension of `output`: the zero-frequency term, followed by the `fft_length / 2` positive-frequency terms.

Along each axis `RFFT2D` is computed on, if `fft_length` is smaller than the corresponding dimension of `input`, the dimension is cropped. If it is larger, the dimension is padded with zeros.

Args:

- `input` : A `Tensor` of type `float32` . A float32 tensor.
- `fft_length` : A `Tensor` of type `int32` . An int32 tensor of shape [2]. The FFT length for each dimension.
- `name` : A name for the operation (optional).

Returns:

A `Tensor` of type `complex64` . A complex64 tensor of the same rank as `input` . The inner-most 2 dimensions of `input` are replaced with their 2D Fourier transform. The inner-most dimension contains `fft_length / 2 + 1` unique frequency components.

numpy compatibility

Equivalent to np.fft.rfft2

Last updated November 2, 2017.

Support

English