tf.spectral.rfft

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

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

See the guide: Spectral Functions > Discrete Fourier Transforms

Real-valued fast Fourier transform.

Computes the 1-dimensional discrete Fourier transform of a real-valued signal over the inner-most dimension of `input`.

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

Along the axis `RFFT` 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 [1]. The FFT length.
- `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 dimension of `input` is replaced with the `fft_length / 2 + 1` unique frequency components of its 1D Fourier transform.

numpy compatibility

Equivalent to np.fft.rfft

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Support

Issue Tracker

Release Notes

Stack Overflow

English

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