

## tf.complex

```
complex(  
    real,  
    imag,  
    name=None  
)
```

Defined in [tensorflow/python/ops/math\\_ops.py](#).

See the guide: [Math > Complex Number Functions](#)

Converts two real numbers to a complex number.

Given a tensor **real** representing the real part of a complex number, and a tensor **imag** representing the imaginary part of a complex number, this operation returns complex numbers elementwise of the form  $a + bj$ , where  $a$  represents the **real** part and  $b$  represents the **imag** part.

The input tensors **real** and **imag** must have the same shape.

For example:

```
real = tf.constant([2.25, 3.25])  
imag = tf.constant([4.75, 5.75])  
tf.complex(real, imag) # [[2.25 + 4.75j], [3.25 + 5.75j]]
```

## Args:

- **real**: A **Tensor**. Must be one of the following types: **float32**, **float64**.
- **imag**: A **Tensor**. Must have the same type as **real**.
- **name**: A name for the operation (optional).

## Returns:

A **Tensor** of type **complex64** or **complex128**.

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