

## tf.cumsum

```
cumsum(  
    x,  
    axis=0,  
    exclusive=False,  
    reverse=False,  
    name=None  
)
```

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

See the guide: [Math > Scan](#)

Compute the cumulative sum of the tensor `x` along `axis`.

By default, this op performs an inclusive cumsum, which means that the first element of the input is identical to the first element of the output:

```
tf.cumsum([a, b, c]) # [a, a + b, a + b + c]
```

By setting the `exclusive` kwarg to `True`, an exclusive cumsum is performed instead:

```
tf.cumsum([a, b, c], exclusive=True) # [0, a, a + b]
```

By setting the `reverse` kwarg to `True`, the cumsum is performed in the opposite direction:

```
tf.cumsum([a, b, c], reverse=True) # [a + b + c, b + c, c]
```

This is more efficient than using separate `tf.reverse` ops.

The `reverse` and `exclusive` kwargs can also be combined:

```
tf.cumsum([a, b, c], exclusive=True, reverse=True) # [b + c, c, 0]
```

## Args:

- `x`: A `Tensor`. Must be one of the following types: `float32`, `float64`, `int64`, `int32`, `uint8`, `uint16`, `int16`, `int8`, `complex64`, `complex128`, `qint8`, `quint8`, `qint32`, `half`.
- `axis`: A `Tensor` of type `int32` (default: 0). Must be in the range `[-rank(x), rank(x))`.
- `exclusive`: If `True`, perform exclusive cumsum.
- `reverse`: A `bool` (default: False).
- `name`: A name for the operation (optional).

## Returns:

A `Tensor`. Has the same type as `x`.

---

Except as otherwise noted, the content of this page is licensed under the [Creative Commons Attribution 3.0 License](#), and code samples are licensed under the [Apache 2.0 License](#). For details, see our [Site Policies](#). Java is a registered trademark of Oracle and/or its affiliates.

Last updated November 2, 2017.

## Stay Connected

[Blog](#)

[GitHub](#)

[Twitter](#)

## Support

[Issue Tracker](#)

[Release Notes](#)

[Stack Overflow](#)

**English**

[Terms](#) | [Privacy](#)