tf.reduce_sum

```
reduce_sum(
    input_tensor,
    axis=None,
    keep_dims=False,
    name=None,
    reduction_indices=None
)
```

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

See the guide: Math > Reduction

Computes the sum of elements across dimensions of a tensor.

Reduces `input_tensor` along the dimensions given in `axis`. Unless `keep_dims` is true, the rank of the tensor is reduced by 1 for each entry in `axis`. If `keep_dims` is true, the reduced dimensions are retained with length 1.

If `axis` has no entries, all dimensions are reduced, and a tensor with a single element is returned.

For example:

```
x = tf.constant([[1, 1, 1], [1, 1, 1]])
tf.reduce_sum(x)  # 6
tf.reduce_sum(x, 0)  # [2, 2, 2]
tf.reduce_sum(x, 1)  # [3, 3]
tf.reduce_sum(x, 1, keep_dims=True)  # [[3], [3]]
tf.reduce_sum(x, [0, 1])  # 6
```

Args:

- `input_tensor`: The tensor to reduce. Should have numeric type.
- `axis`: The dimensions to reduce. If `None` (the default), reduces all dimensions. Must be in the range `[-rank(input_tensor), rank(input_tensor))`.
- `keep_dims`: If true, retains reduced dimensions with length 1.
- `name`: A name for the operation (optional).
- `reduction_indices`: The old (deprecated) name for axis.

Returns:

The reduced tensor.

numpy compatibility

Equivalent to np.sum

Last updated November 2, 2017.