tf.nn.sufficient_statistics

```
sufficient_statistics(
    x,
    axes,
    shift=None,
    keep_dims=False,
    name=None
)
```

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

See the guide: Neural Network > Normalization

Calculate the sufficient statistics for the mean and variance of `x` .

These sufficient statistics are computed using the one pass algorithm on an input that's optionally shifted. See: https://en.wikipedia.org/wiki/Algorithms_for_calculating_variance#Computing_shifted_data

Args:

- `x` : A `Tensor` .
- `axes` : Array of ints. Axes along which to compute mean and variance.
- `shift` : A `Tensor` containing the value by which to shift the data for numerical stability, or `None` if no shift is to be performed. A shift close to the true mean provides the most numerically stable results.
- `keep_dims` : produce statistics with the same dimensionality as the input.
- `name` : Name used to scope the operations that compute the sufficient stats.

Returns:

Four `Tensor` objects of the same type as `x` :

- the count (number of elements to average over).
- the (possibly shifted) sum of the elements in the array.
- the (possibly shifted) sum of squares of the elements in the array.
- the shift by which the mean must be corrected or None if `shift` is None.

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