

tf.contrib.metrics.streaming_concat

```
streaming_concat(  
    values,  
    axis=0,  
    max_size=None,  
    metrics_collections=None,  
    updates_collections=None,  
    name=None  
)
```

Defined in [tensorflow/contrib/metrics/python/ops/metric_ops.py](#).

See the guide: [Metrics \(contrib\)](#) > [Metric Ops](#)

Concatenate values along an axis across batches.

The function `streaming_concat` creates two local variables, `array` and `size`, that are used to store concatenated values. Internally, `array` is used as storage for a dynamic array (if `maxsize` is `None`), which ensures that updates can be run in amortized constant time.

For estimation of the metric over a stream of data, the function creates an `update_op` operation that appends the values of a tensor and returns the length of the concatenated axis.

This op allows for evaluating metrics that cannot be updated incrementally using the same framework as other streaming metrics.

Args:

- `values`: **Tensor** to concatenate. Rank and the shape along all axes other than the axis to concatenate along must be statically known.
- `axis`: optional integer axis to concatenate along.
- `max_size`: optional integer maximum size of `value` along the given axis. Once the maximum size is reached, further updates are no-ops. By default, there is no maximum size: the array is resized as necessary.
- `metrics_collections`: An optional list of collections that `value` should be added to.
- `updates_collections`: An optional list of collections `update_op` should be added to.
- `name`: An optional variable_scope name.

Returns:

- `value`: A **Tensor** representing the concatenated values.
- `update_op`: An operation that concatenates the next values.

Raises:

- `ValueError`: if `values` does not have a statically known rank, `axis` is not in the valid range or the size of `values` is not statically known along any axis other than `axis`.

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