

## tf.contrib.metrics.streaming\_precision\_at\_thresholds

```
streaming_precision_at_thresholds(  
    predictions,  
    labels,  
    thresholds,  
    weights=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](#)

Computes precision values for different **thresholds** on **predictions**.

The **streaming\_precision\_at\_thresholds** function creates four local variables, **true\_positives**, **true\_negatives**, **false\_positives** and **false\_negatives** for various values of thresholds. **precision[i]** is defined as the total weight of values in **predictions** above **thresholds[i]** whose corresponding entry in **labels** is **True**, divided by the total weight of values in **predictions** above **thresholds[i]** (**true\_positives[i]** / (**true\_positives[i]** + **false\_positives[i]**)).

For estimation of the metric over a stream of data, the function creates an **update\_op** operation that updates these variables and returns the **precision**.

If **weights** is **None**, weights default to 1. Use weights of 0 to mask values.

### Args:

- **predictions**: A floating point **Tensor** of arbitrary shape and whose values are in the range **[0, 1]**.
- **labels**: A **bool Tensor** whose shape matches **predictions**.
- **thresholds**: A python list or tuple of float thresholds in **[0, 1]**.
- **weights**: **Tensor** whose rank is either 0, or the same rank as **labels**, and must be broadcastable to **labels** (i.e., all dimensions must be either **1**, or the same as the corresponding **labels** dimension).
- **metrics\_collections**: An optional list of collections that **precision** should be added to.
- **updates\_collections**: An optional list of collections that **update\_op** should be added to.
- **name**: An optional variable\_scope name.

### Returns:

- **precision**: A float **Tensor** of shape **[len(thresholds)]**.
- **update\_op**: An operation that increments the **true\_positives**, **true\_negatives**, **false\_positives** and **false\_negatives** variables that are used in the computation of **precision**.

### Raises:

- **ValueError**: If **predictions** and **labels** have mismatched shapes, or if **weights** is not **None** and its shape

doesn't match `predictions` , or if either `metrics_collections` or `updates_collections` are not a list or tuple.

---

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](#)