

## tf.metrics.recall\_at\_thresholds

```
recall_at_thresholds(  
    labels,  
    predictions,  
    thresholds,  
    weights=None,  
    metrics_collections=None,  
    updates_collections=None,  
    name=None  
)
```

Defined in [tensorflow/python/ops/metrics\\_impl.py](#).

Computes various recall values for different **thresholds** on **predictions**.

The **recall\_at\_thresholds** function creates four local variables, **true\_positives**, **true\_negatives**, **false\_positives** and **false\_negatives** for various values of thresholds. **recall[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 **True** values in **labels** ( $\text{true\_positives}[i] / (\text{true\_positives}[i] + \text{false\_negatives}[i])$ ).

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

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

## Args:

- **labels**: The ground truth values, a **Tensor** whose dimensions must match **predictions**. Will be cast to **bool**.
- **predictions**: A floating point **Tensor** of arbitrary shape and whose values are in the range **[0, 1]**.
- **thresholds**: A python list or tuple of float thresholds in **[0, 1]**.
- **weights**: Optional **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 **recall** 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:

- **recall**: 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 **recall**.

## 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.

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