

tf.metrics.precision

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

Defined in [tensorflow/python/ops/metrics_impl.py](#).

Computes the precision of the predictions with respect to the labels.

The **precision** function creates two local variables, **true_positives** and **false_positives**, that are used to compute the precision. This value is ultimately returned as **precision**, an idempotent operation that simply divides **true_positives** by the sum of **true_positives** and **false_positives**.

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**. **update_op** weights each prediction by the corresponding value in **weights**.

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**: The predicted values, a **Tensor** of arbitrary dimensions. Will be cast to **bool**.
- **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 **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**: Scalar float **Tensor** with the value of **true_positives** divided by the sum of **true_positives** and **false_positives**.
- **update_op**: **Operation** that increments **true_positives** and **false_positives** variables appropriately and whose value matches **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.

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