

## tf.metrics.mean\_per\_class\_accuracy

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

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

Calculates the mean of the per-class accuracies.

Calculates the accuracy for each class, then takes the mean of that.

For estimation of the metric over a stream of data, the function creates an `update_op` operation that updates these variables and returns the `mean_accuracy`.

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

### Args:

- `labels`: A **Tensor** of ground truth labels with shape [batch size] and of type `int32` or `int64`. The tensor will be flattened if its rank > 1.
- `predictions`: A **Tensor** of prediction results for semantic labels, whose shape is [batch size] and type `int32` or `int64`. The tensor will be flattened if its rank > 1.
- `num_classes`: The possible number of labels the prediction task can have. This value must be provided, since a confusion matrix of dimension = [num\_classes, num\_classes] will be allocated.
- `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 `'mean_per_class_accuracy'` should be added to.
- `updates_collections`: An optional list of collections `update_op` should be added to.
- `name`: An optional variable\_scope name.

### Returns:

- `mean_accuracy`: A **Tensor** representing the mean per class accuracy.
- `update_op`: An operation that increments the confusion matrix.

### 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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