tf.losses.mean_pairwise_squared_error

```
mean_pairwise_squared_error(
    labels,
    predictions,
    weights=1.0,
    scope=None,
    loss_collection=tf.GraphKeys.LOSSES
)
```

Defined in `tensorflow/python/ops/losses/losses_impl.py`.

Adds a pairwise-errors-squared loss to the training procedure.

Unlike `mean_squared_error`, which is a measure of the differences between corresponding elements of `predictions` and `labels`, `mean_pairwise_squared_error` is a measure of the differences between pairs of corresponding elements of `predictions` and `labels`.

For example, if `labels`=[a, b, c] and `predictions`=[x, y, z], there are three pairs of differences are summed to compute the loss: loss = [((a-b) - (x-y)).^2 + ((a-c) - (x-z)).^2 + ((b-c) - (y-z)).^2] / 3

Note that since the inputs are of shape `[batch_size, d0, ... dN]`, the corresponding pairs are computed within each batch sample but not across samples within a batch. For example, if `predictions` represents a batch of 16 grayscale images of dimension [batch_size, 100, 200], then the set of pairs is drawn from each image, but not across images.

`weights` acts as a coefficient for the loss. If a scalar is provided, then the loss is simply scaled by the given value. If `weights` is a tensor of size [batch_size], then the total loss for each sample of the batch is rescaled by the corresponding element in the `weights` vector.

Args:

- `labels`: The ground truth output tensor, whose shape must match the shape of `predictions`.
- `predictions`: The predicted outputs, a tensor of size `[batch_size, d0, .. dN]` where N+1 is the total number of dimensions in `predictions`.
- `weights`: Coefficients for the loss a scalar, a tensor of shape `[batch_size]` or a tensor whose shape matches `predictions`.
- `scope`: The scope for the operations performed in computing the loss.
- `loss_collection`: collection to which the loss will be added.

Returns:

A scalar `Tensor` that returns the weighted loss.

Raises:

- `ValueError`: If the shape of `predictions` doesn't match that of `labels` or if the shape of `weights` is invalid. Also if `labels` or `predictions is None.

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