

## tf.contrib.estimator.add\_metrics

```
add_metrics(  
    estimator,  
    metric_fn  
)
```

Defined in [tensorflow/contrib/estimator/python/estimator/extendrs.py](#).

Creates a new `{tf.estimator.Estimator}` which has given metrics.

Example:

```
def my_auc(labels, predictions):  
    return {'auc': tf.metrics.auc(labels, predictions['logistic'])}  
  
estimator = tf.estimator.DNNClassifier(...)  
estimator = tf.contrib.estimator.add_metrics(estimator, my_auc)  
estimator.train(...)  
estimator.evaluate(...)
```

Example usage of custom metric which uses features:

```
def my_auc(features, labels, predictions):  
    return {'auc': tf.metrics.auc(  
        labels, predictions['logistic'], weights=features['weight'])}  
  
estimator = tf.estimator.DNNClassifier(...)  
estimator = tf.contrib.estimator.add_metrics(estimator, my_auc)  
estimator.train(...)  
estimator.evaluate(...)
```

Args:

- `estimator`: A `{tf.estimator.Estimator}` object.
- `metric_fn`: A function which should obey the following signature:
  - Args: can only have following four arguments in any order:
  - predictions: Predictions `Tensor` or dict of `Tensor` created by given `estimator`.
  - features: Input `dict` of `Tensor` objects created by `input_fn` which is given to `estimator.evaluate` as an argument.
  - labels: Labels `Tensor` or dict of `Tensor` created by `input_fn` which is given to `estimator.evaluate` as an argument.
  - config: config attribute of the `estimator`.
- Returns: Dict of metric results keyed by name. Final metrics are a union of this and `estimator's` existing metrics. If there is a name conflict between this and `estimator's` existing metrics, this will override the existing one. The values of the dict are the results of calling a metric function, namely a `(metric_tensor, update_op)` tuple.

Returns:

A new `tf.estimator.Estimator` which has a union of original metrics with given ones.

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