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TensorFlow API r1.4

# tf.contrib.learn.evaluate

```
evaluate(
    graph,
    output_dir,
    checkpoint_path,
    eval_dict,
    update_op=None,
    global_step_tensor=None,
    supervisor_master='',
    log_every_steps=10,
    feed_fn=None,
    max_steps=None
)
```

Defined in tensorflow/contrib/learn/python/learn/graph\_actions.py.

See the guide: Learn (contrib) > Graph actions

Evaluate a model loaded from a checkpoint. (deprecated)

THIS FUNCTION IS DEPRECATED. It will be removed after 2017-02-15. Instructions for updating: graph\_actions.py will be deleted. Use tf.train.\* utilities instead. You can use learn/estimators/estimator.py as an example.

Given <code>graph</code>, a directory to write summaries to (<code>output\_dir</code>), a checkpoint to restore variables from, and a <code>dict</code> of <code>Tensor</code> s to evaluate, run an eval loop for <code>max\_steps</code> steps, or until an exception (generally, an end-of-input signal from a reader operation) is raised from running <code>eval\_dict</code>.

In each step of evaluation, all tensors in the **eval\_dict** are evaluated, and every **log\_every\_steps** steps, they are logged. At the very end of evaluation, a summary is evaluated (finding the summary ops using **Supervisor** 's logic) and written to **output\_dir**.

## Args:

- graph: A Graph to train. It is expected that this graph is not in use elsewhere.
- output\_dir: A string containing the directory to write a summary to.
- checkpoint\_path: A string containing the path to a checkpoint to restore. Can be **None** if the graph doesn't require loading any variables.
- eval\_dict: A dict mapping string names to tensors to evaluate. It is evaluated in every logging step. The result of the final evaluation is returned. If update\_op is None, then it's evaluated in every step. If max\_steps is None, this should depend on a reader that will raise an end-of-input exception when the inputs are exhausted.
- update\_op: A Tensor which is run in every step.
- global\_step\_tensor: A Variable containing the global step. If None, one is extracted from the graph using the same logic as in Supervisor. Used to place eval summaries on training curves.
- supervisor\_master: The master string to use when preparing the session.
- log\_every\_steps: Integer. Output logs every log\_every\_steps evaluation steps. The logs contain the eval\_dict and timing information.
- feed\_fn: A function that is called every iteration to produce a feed\_dict passed to session.run calls. Optional.

• max\_steps: Integer. Evaluate eval\_dict this many times.

## Returns:

A tuple (eval\_results, global\_step): eval\_results: A dict mapping string to numeric values (int, float) that are the result of running eval\_dict in the last step. None if no eval steps were run. global\_step: The global step this evaluation corresponds to.

#### Raises:

• ValueError: if output\_dir is empty.

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