

[x Dismiss](#)

Join the Stack Overflow Community

Stack Overflow is a community of 7.0 million programmers, just like you, helping each other.

Join them; it only takes a minute:

Sign up

Update Tensorflow Checkpoint files to 1.0

I have a model that was trained in Tensorflow r0.12, that created checkpoint files using `saver_v2`. My model was an RNN making use of `rnn_cell` and `rnn_cell.GRUCell` from `tensorflow.python.ops`. Since the change to 1.0, this package has moved to `core_rnn_cell_impl` in `tensorflow.contrib.rnn.python.ops` according to [this answer](#)

I ran the `tf_update.py` file from [here](#) to update my files to the new revision. However, ever since updating, my old checkpoint files do not work. It seems that some of the variables required by the new `GRUCell` implementation were not present or had a different name.

Example errors (there are 132 such errors):

```

2017-02-22 11:36:08.037315: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/candidate/weights not found in
checkpoint
2017-02-22 11:36:08.037382: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/candidate/weights/Adam not found in
checkpoint
2017-02-22 11:36:08.037494: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/biases/Adam not found in
checkpoint
2017-02-22 11:36:08.037499: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/candidate/weights/Adam_1 not found
in checkpoint
2017-02-22 11:36:08.037538: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/weights not found in
checkpoint
2017-02-22 11:36:08.037615: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/biases not found in
checkpoint
2017-02-22 11:36:08.037618: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/biases/Adam_1 not found in
checkpoint
2017-02-22 11:36:08.038098: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/weights/Adam_1 not found in
checkpoint
2017-02-22 11:36:08.038121: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderAttnCell/gru_cell/gates/weights/Adam not found in
checkpoint
2017-02-22 11:36:08.038222: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderCell0/gru_cell/candidate/biases not found in
checkpoint
2017-02-22 11:36:08.038229: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderCell0/gru_cell/candidate/weights not found in
checkpoint
2017-02-22 11:36:08.038233: W tensorflow/core/framework/op_kernel.cc:993] Not
found: Key NLC/Decoder/DecoderCell0/gru_cell/candidate/biases/Adam_1 not found in
checkpoint

```

Saving/Loading worked perfectly until the update. What can I do to update my old checkpoint files to r1.0?

If it matters, I am using python2.7 and the same error occurs when using either CPU-only tensorflow or tensorflow with CUDA.

python tensorflow

asked Feb 22 at 16:47



jbird

62 1 9

1 Answer

There is no easy way to do this... one approach would be to use `get_variable_to_shape_map()`

```
ckpt_reader = tf.train.NewCheckpointReader(filepath)
ckpt_vars = ckpt_reader.get_variable_to_shape_map()
```

that will give you a list of variable names to shapes in your saved checkpoint. then... create a dict that maps from old names to new names i.e.

```
old_to_new={}
old_to_new[old_name] = new_name
```

then instantiate a saver and restore just those vars

```
saver = tf.Saver(old_to_new)
saver.restore(filepath)
```

Good luck, hope this helps.

answered Feb 23 at 1:06



[aselle](#)

342 1 5

Thanks for the straightforward answer. I think I am just going to retrain the model for simplicity but I'm glad there is actually a way to do it. – [jbird](#) Feb 24 at 20:45
