TensorFlow: Blas GEMM launch failed

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When I'm trying to use TensorFlow with Keras using the gpu, I'm getting this error message:

```
C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\ipykernel\__main__.py:2:
UserWarning: Update your `fit_generator` call to the Keras 2 API:
`fit_generator(<keras.pre..., 37800, epochs=2, validation_data=<keras.pre...,
validation_steps=4200)`
  from ipykernel import kernelapp as app

Epoch 1/2

InternalError                                Traceback (most recent call last)
C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _do_call(self, fn, *args)
   1038      try:
-> 1039        return fn(*args)
   1040      except errors.OpError as e:

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _run_fn(session, feed_dict, fetch_list,
target_list, options, run_metadata)
   1020                               feed_dict, fetch_list, target_list,
-> 1021                               status, run_metadata)
   1022

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\contextlib.py in __exit__(self, type,
value, traceback)
     65            try:
---> 66              next(self.gen)
     67            except StopIteration:

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\framework\errors_impl.py in
raise_exception_on_not_ok_status()
    465            compat.as_text(pywrap_tensorflow.TF_Message(status)),
--> 466            pywrap_tensorflow.TF_GetCode(status))
    467    finally:

InternalError: Blas GEMM launch failed : a.shape=(64, 784), b.shape=(784, 10), m=64,
n=10, k=784
     [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
_device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
dense_1/kernel/read)]]

During handling of the above exception, another exception occurred:

InternalError                                Traceback (most recent call last)
<ipython-input-13-2a52d1079a66> in <module>()
      1 history=model.fit_generator(batches, batches.n, nb_epoch=2,
----> 2               validation_data=val_batches, nb_val_samples=val_batches.n)

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\legacy\interfaces.py
in wrapper(*args, **kwargs)
     86            warnings.warn('Update your `' + object_name +
     87                          '` call to the Keras 2 API: ' + signature,
stacklevel=2)
---> 88            return func(*args, **kwargs)
```

```
    89              wrapper._legacy_support_signature = inspect.getargspec(func)
    90              return wrapper
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\models.py in
fit_generator(self, generator, steps_per_epoch, epochs, verbose, callbacks,
validation_data, validation_steps, class_weight, max_q_size, workers, pickle_safe,
initial_epoch)

```
   1108                                      workers=workers,
   1109                                      pickle_safe=pickle_safe,
-> 1110                                      initial_epoch=initial_epoch)
   1111
   1112        @interfaces.legacy_generator_methods_support
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\legacy\interfaces.py
in wrapper(*args, **kwargs)

```
    86              warnings.warn('Update your `' + object_name +
    87                           '` call to the Keras 2 API: ' + signature,
stacklevel=2)
---> 88              return func(*args, **kwargs)
    89          wrapper._legacy_support_signature = inspect.getargspec(func)
    90          return wrapper
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\engine\training.py in
fit_generator(self, generator, steps_per_epoch, epochs, verbose, callbacks,
validation_data, validation_steps, class_weight, max_q_size, workers, pickle_safe,
initial_epoch)

```
   1888              outs = self.train_on_batch(x, y,
   1889                                  sample_weight=sample_weight,
-> 1890                                  class_weight=class_weight)
   1891
   1892              if not isinstance(outs, list):
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\engine\training.py in
train_on_batch(self, x, y, sample_weight, class_weight)

```
   1631          ins = x + y + sample_weights
   1632          self._make_train_function()
-> 1633          outputs = self.train_function(ins)
   1634          if len(outputs) == 1:
   1635              return outputs[0]
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\keras\backend\tensorflow_backend.py in __call__(self, inputs)

```
   2227          session = get_session()
   2228          updated = session.run(self.outputs + [self.updates_op],
-> 2229                              feed_dict=feed_dict)
   2230          return updated[:len(self.outputs)]
   2231
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in run(self, fetches, feed_dict, options,
run_metadata)

```
    776      try:
    777          result = self._run(None, fetches, feed_dict, options_ptr,
--> 778                         run_metadata_ptr)
    779          if run_metadata:
    780              proto_data = tf_session.TF_GetBuffer(run_metadata_ptr)
```

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _run(self, handle, fetches, feed_dict,
options, run_metadata)

```
    980      if final_fetches or final_targets:
    981          results = self._do_run(handle, final_targets, final_fetches,
--> 982                          feed_dict_string, options, run_metadata)
    983      else:
    984          results = []
```

```
       C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\tensorflow\python\client\session.py in _do_run(self, handle, target_list,
       fetch_list, feed_dict, options, run_metadata)
         1030      if handle is None:
         1031         return self._do_call(_run_fn, self._session, feed_dict, fetch_list,
       -> 1032                            target_list, options, run_metadata)
         1033      else:
         1034         return self._do_call(_prun_fn, self._session, handle, feed_dict,

       C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\tensorflow\python\client\session.py in _do_call(self, fn, *args)
         1050         except KeyError:
         1051            pass
       -> 1052         raise type(e)(node_def, op, message)
         1053
         1054   def _extend_graph(self):

       InternalError: Blas GEMM launch failed : a.shape=(64, 784), b.shape=(784, 10), m=64,
       n=10, k=784
            [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
       _device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
       dense_1/kernel/read)]]

       Caused by op 'dense_1/MatMul', defined at:
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\runpy.py", line 193, in
       _run_module_as_main
           "__main__", mod_spec)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\runpy.py", line 85, in _run_code
           exec(code, run_globals)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\ipykernel\__main__.py", line 3, in <module>
           app.launch_new_instance()
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\traitlets\config\application.py", line 658, in launch_instance
           app.start()
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\ipykernel\kernelapp.py", line 477, in start
           ioloop.IOLoop.instance().start()
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\zmq\eventloop\ioloop.py", line 177, in start
           super(ZMQIOLoop, self).start()
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\tornado\ioloop.py",
       line 888, in start
           handler_func(fd_obj, events)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\tornado\stack_context.py", line 277, in null_wrapper
           return fn(*args, **kwargs)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\zmq\eventloop\zmqstream.py", line 440, in _handle_events
           self._handle_recv()
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\zmq\eventloop\zmqstream.py", line 472, in _handle_recv
           self._run_callback(callback, msg)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\zmq\eventloop\zmqstream.py", line 414, in _run_callback
           callback(*args, **kwargs)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\tornado\stack_context.py", line 277, in null_wrapper
           return fn(*args, **kwargs)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\ipykernel\kernelbase.py", line 283, in dispatcher
           return self.dispatch_shell(stream, msg)
         File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
       packages\ipykernel\kernelbase.py", line 235, in dispatch_shell
```

```
        handler(stream, idents, msg)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\ipykernel\kernelbase.py", line 399, in execute_request
        user_expressions, allow_stdin)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\ipykernel\ipkernel.py", line 196, in do_execute
        res = shell.run_cell(code, store_history=store_history, silent=silent)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\ipykernel\zmqshell.py", line 533, in run_cell
        return super(ZMQInteractiveShell, self).run_cell(*args, **kwargs)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2683, in run_cell
        interactivity=interactivity, compiler=compiler, result=result)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2787, in run_ast_nodes
        if self.run_code(code, result):
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2847, in run_code
        exec(code_obj, self.user_global_ns, self.user_ns)
    File "<ipython-input-10-1e7a3b259f23>", line 4, in <module>
        model.add(Dense(10, activation='softmax'))
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\models.py",
  line 466, in add
        output_tensor = layer(self.outputs[0])
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\engine\topology.py", line 585, in __call__
        output = self.call(inputs, **kwargs)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\layers\core.py", line 840, in call
        output = K.dot(inputs, self.kernel)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\backend\tensorflow_backend.py", line 936, in dot
        out = tf.matmul(x, y)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\ops\math_ops.py", line 1801, in matmul
        a, b, transpose_a=transpose_a, transpose_b=transpose_b, name=name)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\ops\gen_math_ops.py", line 1263, in _mat_mul
        transpose_b=transpose_b, name=name)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\op_def_library.py", line 768, in apply_op
        op_def=op_def)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\ops.py", line 2336, in create_op
        original_op=self._default_original_op, op_def=op_def)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\ops.py", line 1228, in __init__
        self._traceback = _extract_stack()

InternalError (see above for traceback): Blas GEMM launch failed : a.shape=(64, 784),
b.shape=(784, 10), m=64, n=10, k=784
      [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
_device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
dense_1/kernel/read)]]
```

When I'm trying to use TensorFlow with Keras using the cpu, I'm getting this error message:

```
C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\ipykernel\__main__.py:5:
UserWarning: Update your `fit_generator` call to the Keras 2 API:
`fit_generator(<keras.pre..., 37800, validation_steps=4200, validation_data=
<keras.pre..., epochs=2)`
Epoch 1/2
```

```
-------------------------------------------------------------------
InternalError                           Traceback (most recent call last)
C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _do_call(self, fn, *args)
   1038       try:
-> 1039          return fn(*args)
   1040       except errors.OpError as e:

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _run_fn(session, feed_dict, fetch_list,
target_list, options, run_metadata)
   1020                                    feed_dict, fetch_list, target_list,
-> 1021                                    status, run_metadata)
   1022

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\contextlib.py in __exit__(self, type,
value, traceback)
     65            try:
---> 66                next(self.gen)
     67            except StopIteration:

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\framework\errors_impl.py in
raise_exception_on_not_ok_status()
    465            compat.as_text(pywrap_tensorflow.TF_Message(status)),
--> 466            pywrap_tensorflow.TF_GetCode(status))
    467     finally:

InternalError: Blas GEMM launch failed : a.shape=(64, 784), b.shape=(784, 10), m=64,
n=10, k=784
     [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
_device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
dense_1/kernel/read)]]
     [[Node: Assign_3/_84 = _Recv[client_terminated=false,
recv_device="/job:localhost/replica:0/task:0/cpu:0",
send_device="/job:localhost/replica:0/task:0/gpu:0", send_device_incarnation=1,
tensor_name="edge_374_Assign_3", tensor_type=DT_FLOAT,
_device="/job:localhost/replica:0/task:0/cpu:0"]()]]

During handling of the above exception, another exception occurred:

InternalError                           Traceback (most recent call last)
<ipython-input-14-f66b4d3d5b88> in <module>()
      3 with tf.device('/cpu:0'):
      4     history=model.fit_generator(batches, batches.n, nb_epoch=2,
----> 5                     validation_data=val_batches, nb_val_samples=val_batches.n)

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\legacy\interfaces.py
in wrapper(*args, **kwargs)
     86                warnings.warn('Update your `' + object_name +
     87                              '` call to the Keras 2 API: ' + signature,
stacklevel=2)
---> 88                return func(*args, **kwargs)
     89         wrapper._legacy_support_signature = inspect.getargspec(func)
     90         return wrapper

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\models.py in
fit_generator(self, generator, steps_per_epoch, epochs, verbose, callbacks,
validation_data, validation_steps, class_weight, max_q_size, workers, pickle_safe,
initial_epoch)
   1108                                    workers=workers,
   1109                                    pickle_safe=pickle_safe,
-> 1110                                    initial_epoch=initial_epoch)
   1111
   1112     @interfaces.legacy_generator_methods_support
```

```
C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\legacy\interfaces.py
in wrapper(*args, **kwargs)
     86                 warnings.warn('Update your `' + object_name +
     87                              '` call to the Keras 2 API: ' + signature,
stacklevel=2)
---> 88             return func(*args, **kwargs)
     89         wrapper._legacy_support_signature = inspect.getargspec(func)
     90         return wrapper

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\engine\training.py in
fit_generator(self, generator, steps_per_epoch, epochs, verbose, callbacks,
validation_data, validation_steps, class_weight, max_q_size, workers, pickle_safe,
initial_epoch)
   1888                 outs = self.train_on_batch(x, y,
   1889                                         sample_weight=sample_weight,
-> 1890                                         class_weight=class_weight)
   1891
   1892                 if not isinstance(outs, list):

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\engine\training.py in
train_on_batch(self, x, y, sample_weight, class_weight)
   1631             ins = x + y + sample_weights
   1632         self._make_train_function()
-> 1633         outputs = self.train_function(ins)
   1634         if len(outputs) == 1:
   1635             return outputs[0]

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\keras\backend\tensorflow_backend.py in __call__(self, inputs)
   2227         session = get_session()
   2228         updated = session.run(self.outputs + [self.updates_op],
-> 2229                               feed_dict=feed_dict)
   2230         return updated[:len(self.outputs)]
   2231

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in run(self, fetches, feed_dict, options,
run_metadata)
    776     try:
    777       result = self._run(None, fetches, feed_dict, options_ptr,
--> 778                          run_metadata_ptr)
    779       if run_metadata:
    780         proto_data = tf_session.TF_GetBuffer(run_metadata_ptr)

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _run(self, handle, fetches, feed_dict,
options, run_metadata)
    980     if final_fetches or final_targets:
    981       results = self._do_run(handle, final_targets, final_fetches,
--> 982                              feed_dict_string, options, run_metadata)
    983     else:
    984       results = []

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _do_run(self, handle, target_list,
fetch_list, feed_dict, options, run_metadata)
   1030     if handle is None:
   1031       return self._do_call(_run_fn, self._session, feed_dict, fetch_list,
-> 1032                            target_list, options, run_metadata)
   1033     else:
   1034       return self._do_call(_prun_fn, self._session, handle, feed_dict,

C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tensorflow\python\client\session.py in _do_call(self, fn, *args)
```

```
      1050            except KeyError:
      1051                pass
->   1052            raise type(e)(node_def, op, message)
      1053
      1054    def _extend_graph(self):
```

```
InternalError: Blas GEMM launch failed : a.shape=(64, 784), b.shape=(784, 10), m=64,
n=10, k=784
        [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
_device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
dense_1/kernel/read)]]
        [[Node: Assign_3/_84 = _Recv[client_terminated=false,
recv_device="/job:localhost/replica:0/task:0/cpu:0",
send_device="/job:localhost/replica:0/task:0/gpu:0", send_device_incarnation=1,
tensor_name="edge_374_Assign_3", tensor_type=DT_FLOAT,
_device="/job:localhost/replica:0/task:0/cpu:0"]()]]

Caused by op 'dense_1/MatMul', defined at:
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\runpy.py", line 193, in
_run_module_as_main
    "__main__", mod_spec)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\runpy.py", line 85, in _run_code
    exec(code, run_globals)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\__main__.py", line 3, in <module>
    app.launch_new_instance()
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\traitlets\config\application.py", line 658, in launch_instance
    app.start()
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\kernelapp.py", line 477, in start
    ioloop.IOLoop.instance().start()
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\zmq\eventloop\ioloop.py", line 177, in start
    super(ZMQIOLoop, self).start()
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\tornado\ioloop.py",
line 888, in start
    handler_func(fd_obj, events)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tornado\stack_context.py", line 277, in null_wrapper
    return fn(*args, **kwargs)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\zmq\eventloop\zmqstream.py", line 440, in _handle_events
    self._handle_recv()
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\zmq\eventloop\zmqstream.py", line 472, in _handle_recv
    self._run_callback(callback, msg)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\zmq\eventloop\zmqstream.py", line 414, in _run_callback
    callback(*args, **kwargs)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\tornado\stack_context.py", line 277, in null_wrapper
    return fn(*args, **kwargs)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\kernelbase.py", line 283, in dispatcher
    return self.dispatch_shell(stream, msg)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\kernelbase.py", line 235, in dispatch_shell
    handler(stream, idents, msg)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\kernelbase.py", line 399, in execute_request
    user_expressions, allow_stdin)
  File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
packages\ipykernel\ipkernel.py", line 196, in do_execute
    res = shell.run_cell(code, store_history=store_history, silent=silent)
```

```
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\ipykernel\zmqshell.py", line 533, in run_cell
      return super(ZMQInteractiveShell, self).run_cell(*args, **kwargs)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2683, in run_cell
      interactivity=interactivity, compiler=compiler, result=result)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2787, in run_ast_nodes
      if self.run_code(code, result):
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\IPython\core\interactiveshell.py", line 2847, in run_code
      exec(code_obj, self.user_global_ns, self.user_ns)
    File "<ipython-input-12-1e7a3b259f23>", line 4, in <module>
      model.add(Dense(10, activation='softmax'))
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-packages\keras\models.py",
  line 466, in add
      output_tensor = layer(self.outputs[0])
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\engine\topology.py", line 585, in __call__
      output = self.call(inputs, **kwargs)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\layers\core.py", line 840, in call
      output = K.dot(inputs, self.kernel)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\keras\backend\tensorflow_backend.py", line 936, in dot
      out = tf.matmul(x, y)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\ops\math_ops.py", line 1801, in matmul
      a, b, transpose_a=transpose_a, transpose_b=transpose_b, name=name)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\ops\gen_math_ops.py", line 1263, in _mat_mul
      transpose_b=transpose_b, name=name)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\op_def_library.py", line 768, in apply_op
      op_def=op_def)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\ops.py", line 2336, in create_op
      original_op=self._default_original_op, op_def=op_def)
    File "C:\Users\nicol\Anaconda3\envs\tensorflow\lib\site-
  packages\tensorflow\python\framework\ops.py", line 1228, in __init__
      self._traceback = _extract_stack()

InternalError (see above for traceback): Blas GEMM launch failed : a.shape=(64, 784),
b.shape=(784, 10), m=64, n=10, k=784
    [[Node: dense_1/MatMul = MatMul[T=DT_FLOAT, transpose_a=false, transpose_b=false,
_device="/job:localhost/replica:0/task:0/gpu:0"](flatten_1/Reshape,
dense_1/kernel/read)]]
    [[Node: Assign_3/_84 = _Recv[client_terminated=false,
recv_device="/job:localhost/replica:0/task:0/cpu:0",
send_device="/job:localhost/replica:0/task:0/gpu:0", send_device_incarnation=1,
tensor_name="edge_374_Assign_3", tensor_type=DT_FLOAT,
_device="/job:localhost/replica:0/task:0/cpu:0"]()]]
```

In both cases, the error is with InternalError (see above for traceback): Blas GEMM launch failed
Can you tell me how to get Blas GEMM to launch? I installed tensorflow and keras in a 3.5 python
anaconda environment where I also installed all needed module (numpy, pandas, scipy, scikit-
learn). I have a Windows 10 with a NVIDIA gpu that can use CUDA. I downloaded CUDA and
cuDNN. I'm using the Jupyter notebook on Chrome.

Sometimes when I run my code, rather than having this error, I get that it starts running and then it crashes. After the crash, I can't do anything on my jupyter notebook and after some time a pop-up asks me if I want to kill the page. This is an image of what I got after the crash. ! (http://www.hostingpics.net/viewer.php?id=647186tensorflowError.png)

P.S. I know my problem is similar as in this question: Tensorflow Basic Example Error: CUBLAS_STATUS_NOT_INITIALIZED but it has not been solved there and I'm not sure this question is clear enough or is exactly the same problem as I have so I'm posting it with my own error message. This problem is different of: TensorFlow: InternalError: Blas SGEMM launch failed Since I have a problem with GEMM rather than SGEMM and that my problem is both with gpu and cpu and it is not solved by the answer of this question.

python   tensorflow   keras   blas

Share Edit Follow   edited May 16 '17 at 4:39   asked May 15 '17 at 22:59
                                                  talonmies   Nicolas
                                             66.4k   18   163   241   **359**   1   3   9

18 Answers

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41

▼

This worked for me on TensorFlow 2.1.0 (per: https://www.tensorflow.org/api_docs/python/tf/config/experimental/set_memory_growth)

```
import tensorflow as tf
physical_devices = tf.config.list_physical_devices('GPU')
tf.config.experimental.set_memory_growth(physical_devices[0], True)
```

Share Edit Follow   answered Mar 16 '20 at 1:36
                                                          socasanta
                                                          871   5   13

3   Thanks, this seems to work for me aswell on Tensorflow 2.1.0 – charel-f Apr 4 '20 at 10:41

1   What about tensorflow 2.0, if I may ask – MasterControlProgram May 2 '20 at 17:02

1   @MasterControlProgram It's present in the 2.0 API, but I haven't actually tried it in 2.0. – socasanta May 3 '20 at 16:00

2   I had to change the code little for a multi-GPU machine but found it eventually worked. – Tae-Sung Shin May 28 '20 at 18:01

▲

24

It's a simple fix, but it was a nightmare to figure it all out

On Windows I found the Keras install in Anaconda3\Lib\site-packages\keras

sources:

https://www.tensorflow.org/guide/using_gpu

https://github.com/keras-team/keras/blob/master/keras/backend/tensorflow_backend.py

Find the following in your keras/tensorflow_backend.py file you'll add config.gpu_options.allow_growth= True in both places

```
if _SESSION is None:
        if not os.environ.get('OMP_NUM_THREADS'):
            config = tf.ConfigProto(allow_soft_placement=True)
            config.gpu_options.allow_growth=True
        else:
            num_thread = int(os.environ.get('OMP_NUM_THREADS'))
            config = tf.ConfigProto(intra_op_parallelism_threads=num_thread,
                                    allow_soft_placement=True)
            config.gpu_options.allow_growth=True
        _SESSION = tf.Session(config=config)
    session = _SESSION
```

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answered Sep 1 '18 at 21:39

Linda MacPhee-Cobb
5,833   3   16   18

It would be nice to read one line why :) For me, the solution was that the GPU is not used in the background – MasterControlProgram May 2 '20 at 16:49

2   the above lines are not present in tensorflow 2.0 – Hrushi May 18 '20 at 9:35
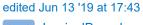

5

Make sure you have no other processes using the GPU running. Run nvidia-smi to check this.

SOURCE: An issue brought up by @reedwm.

Share Edit Follow

edited Jun 13 '19 at 17:43   answered Jun 13 '19 at 12:48

LogicalBranch   liwy
3,392   2   16   47   **59**   1   2

---

1   For example when you use pycharm and jupyter in parallel! – Phil Jul 2 '20 at 14:12

Thanks for this. Previous answers worked for me as well, but I was wondering why the issue was appearing out of no where. After seeing this I killed the running process and the problem was solved automatically. – Pritam Oct 3 '20 at 18:03

Another example: having multiple kernels running in JupyterLab. Just restarting the kernel with this bug was insufficient; I had to shut down all other kernels first. – Denziloe Oct 26 '20 at 21:55

This Answer is much related to **Tensorflow**:

5   Sometimes Tensorflow fails at creation in Windows.

Restarting the notebook using gpu solves it in most cases

If it doesnt then try restarting the notebook after adding these options in your code.

```
gpu_options = tf.GPUOptions(per_process_gpu_memory_fraction=0.9)

tf.Session(config=tf.ConfigProto(gpu_options=gpu_options,allow_soft_placement=True)
```

I never had such error while using **Keras** But try restarting your notebook

Share Edit Follow   edited Jul 27 '19 at 7:44   answered Sep 13 '18 at 16:10
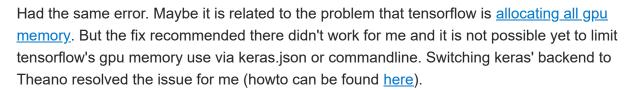   Michael Yadidya
                                                                              971   7   15

> there is a closing parenthesis missing at the end – bit_scientist Mar 17 '20 at 1:46
>
> Would be a helpful .. Unfortunately it does not have GPUOptions() in the next version 2. Could you update? Thanks you! – MasterControlProgram May 2 '20 at 16:57

Had the same error. Maybe it is related to the problem that tensorflow is allocating all gpu memory. But the fix recommended there didn't work for me and it is not possible yet to limit

4   tensorflow's gpu memory use via keras.json or commandline. Switching keras' backend to Theano resolved the issue for me (howto can be found here).

Share Edit Follow   edited Jun 16 '17 at 7:57   answered Jun 4 '17 at 12:31
                                         MiniQuark   fotis j
                                         39k 27 133 164   **287** 4   12

I was getting exactly the same error message. I realized that there was an error with my CUDA installation, specifically with the `cuBLAS` library.

3   You can check if yours has the same problem by running the sample program `simpleCUBLAS` (it comes with the CUDA installation, you will probably find it in the CUDA home folder: `$CUDA_HOME\samples\7_CUDALibraries\simpleCUBLAS`)

Try running this program. If the test fails, you have a problem with your CUDA installation. You should try to reinstall it. That's how I solved the same problem here.

Renaming cublas64_10.dll to cublas64_100.dll may be a solution.

Share Edit Follow   edited May 18 '20 at 19:15   answered Jun 16 '17 at 22:07

Nicolas Gervais   Tairone
17.6k   8   47   76   **91**   1   6

I ran into this problem when trying to run several servers that use a model to serve predictions.
As I wasn't training a model but simply using it, the difference between using GPU or CPU was
minor. For this specific case, the issue can be avoided by forcing Tensorflow to use the CPU by
"hiding" the GPU.

2

```
import os
os.environ["CUDA_VISIBLE_DEVICES"] = "-1"   # Force TF to use only the CPU
```

Share Edit Follow   answered Jul 26 '19 at 9:51

                                                                 Edgar H
                                                                 982   1   15   27

I have got the same error,lucky,I have got it fixed. my error is: the last time,I open the tensorflow
`sess = tf.Session()` ,but I forgot close the session.

2
so I open the terminal, type command:

```
ps -aux | grep program_name
```

find the PID,and type command kill the PID:

```
kill -9 PID
```

Ok,the GPU is realase.

Share Edit Follow   edited Sep 4 '18 at 9:03   answered Sep 4 '18 at 8:40

                                     Mickael Maison   xiaxia wang
                                     17.1k   7   44   46   **21**   1

For me, closing and restarting my processes using Python worked.

2
I tried a few things here but they didn't work. For example, the

```
os.environ["CUDA_VISIBLE_DEVICES"] = "-1"
```

line. I think it is because I am using a newer version of Keras and Tensorflow. A lot of what I have read on the internet, include the official Keras tutorial, does not work because of version conflicts.

But I saw a couple of posts about more than one Python process running. So I shut down Jupyter, Anaconda, and PyCharm, and restarted everything. And then the error went away. It may or may not be what fixes is for you, but it is worth a try.

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answered Sep 11 '20 at 11:13

Paul J Abernathy
911 2 11 24

2

For me it was a runaway ipynb script which I thought I had terminated but was actually still running, thus my GPU was in use and this error appeared

Share Edit Follow

answered May 13 '20 at 0:53

jarrettyeo
1,539 1 17 31

1

I was stuck with this for days and I was able to get rid of this error eventually.

I had the wrong versions of tensorflow and cuda installed in my PC. Just make sure you have the right versions of tf,cuda and cudnn installed.

https://i.stack.imgur.com/Laiii.png

Use this link for reference.

Share Edit Follow

answered Sep 24 '19 at 17:14

envi z
197 2 11

0

I was using Jupyter Lab, but must have had the GPU locked from another TensofFlow program that I ran earlier. After killing Jupyter Lab and restarting it, the error went away.

Share Edit Follow

answered Oct 15 '19 at 11:52

Nikhil Gupta
641 7 12

0

Had python open in Dos window open in Windows 10. When running from my IDE, it gave the above message. Exiting from that Dos instance of python allowed me to get past this error when running from my IDE.

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I had the same error in Win10 using PyCharm on Keras 2.4.3 and TensorFlow 2.3.0

0

It seems like an error related to TensorFlow itself running on Windows. Solved the issue by closing PyCharm and rerun it as administrator.

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I had a similar kind of error while inferencing on a Tensorflow model , Fixed that issue by
downgrading Tensorflow from 2.1 to 1.14. Initially, I checked the GPU usage, it took all the
GPU memory and couldn't able to perform the inference and found the following exception:

0

> InternalError: 2 root error(s) found.
> (0) Internal: Blas GEMM launch failed : a.shape=(86494, 257), b.shape=(257, 64),
> m=86494, n=64, k=257 [[{{node log_mel_features/MatMul}}]]
> (1) Internal: Blas GEMM launch failed : a.shape=(86494, 257), b.shape=(257, 64),
> m=86494, n=64, k=257 [[{{node log_mel_features/MatMul}}]]
> [[log_mel_features/Log/_769]] Bellow are the commands I used:

```
pip uninstall tensorflow-gpu
pip install tensorflow-gpu==1.14
```

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Adding the following lines after imports solved the problem:

0

```
configuration = tf.compat.v1.ConfigProto()
configuration.gpu_options.allow_growth = True
session = tf.compat.v1.Session(config=configuration)
```

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Had the same error (Win10 using Keras and Visual Studio Code). Seems like TensorFlow was
still active somehow even after terminating my script. Simply closing VS Code and restarting
solved the issue.

0

Share Edit Follow   answered May 6 '19 at 16:57

Peter
1,177   1   8   22

Try running the sample program simpleCUBLAS (it comes with CUDA) to test your CUBLAS
installation and see if it works.

0

In my case (I am using Ubuntu) I had to reinstall CUDA to solve this issue. After I did that,
simpleCUBLAS passed the test.

For some reason I started running into the same issue after a while, and I found that cleaning the
directory .nv (inside my home folder) resolved the issue, and simpleCUBLAS test passed again.

Share Edit Follow   answered Jun 16 '17 at 23:30

Tairone
91   1   6

I'm running Ubuntu 16.04 and simpleCUBLAS passes, but still getting the error "Blas GEMM launch failed"
– naisanza Sep 5 '17 at 19:52

1   @naisanza you could be running two programs at once, both wanting to use tensorflow gpu – kRazzy R
Feb 21 '18 at 3:37

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protect this question from spam and non-answer activity.