tu012@bracewell-login:/datasets/work/d61-mission-wp2/work/David/dreamwalk> sinteractive -n 1 -g gpu:4 -m 16gb -t 24:00:00

running: salloc --ntasks-per-node 1 --mem 16gb -J interactive -t 24:00:00 --gres gpu:4 srun --pty /bin/bash -l

salloc: Pending job allocation 45660831

salloc: job 45660831 queued and waiting for resources

salloc: job 45660831 has been allocated resources

salloc: Granted job allocation 45660831

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

tu012@b032:/datasets/work/d61-mission-wp2/work/David/dreamwalk>

tu012@b032:/datasets/work/d61-mission-wp2/work/David/dreamwalk> module load tensorflow/2.2.0-py37-gcc5-gpu

tu012@b032:/datasets/work/d61-mission-wp2/work/David/dreamwalk> python3 train2.py

2020-08-04 09:58:53.104060: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudart.so.9.0

TF version: 2.2.0

Hub version: 0.8.0

WARNING: Logging before flag parsing goes to stderr.

W0804 09:58:59.230033 46912496467904 deprecation.py:323] From train2.py:12: is\_gpu\_available (from tensorflow.python.framework.test\_util) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.config.list\_physical\_devices('GPU')` instead.

2020-08-04 09:58:59.232064: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcuda.so.1

2020-08-04 09:59:02.101627: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 0 with properties:

pciBusID: 0000:04:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:02.102803: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 1 with properties:

pciBusID: 0000:06:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:02.103907: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 2 with properties:

pciBusID: 0000:07:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:02.104989: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 3 with properties:

pciBusID: 0000:08:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:02.105062: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudart.so.9.0

2020-08-04 09:59:02.106645: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcublas.so.9.0

2020-08-04 09:59:02.108145: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcufft.so.9.0

2020-08-04 09:59:02.108861: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcurand.so.9.0

2020-08-04 09:59:02.110480: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusolver.so.9.0

2020-08-04 09:59:02.112030: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusparse.so.9.0

2020-08-04 09:59:02.115721: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudnn.so.7

2020-08-04 09:59:02.123303: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1703] Adding visible gpu devices: 0, 1, 2, 3

2020-08-04 09:59:02.123338: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudart.so.9.0

2020-08-04 09:59:03.537578: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1102] Device interconnect StreamExecutor with strength 1 edge matrix:

2020-08-04 09:59:03.537630: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1108] 0 1 2 3

2020-08-04 09:59:03.537639: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 0: N Y Y Y

2020-08-04 09:59:03.537644: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 1: Y N Y Y

2020-08-04 09:59:03.537649: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 2: Y Y N Y

2020-08-04 09:59:03.537657: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 3: Y Y Y N

2020-08-04 09:59:03.543931: W tensorflow/core/common\_runtime/gpu/gpu\_bfc\_allocator.cc:39] Overriding allow\_growth setting because the TF\_FORCE\_GPU\_ALLOW\_GROWTH environment variable is set. Original config value was 0.

2020-08-04 09:59:03.543971: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/device:GPU:0 with 14969 MB memory) -> physical GPU (device: 0, name: Tesla P100-SXM2-16GB, pci bus id: 0000:04:00.0, compute capability: 6.0)

2020-08-04 09:59:03.546322: W tensorflow/core/common\_runtime/gpu/gpu\_bfc\_allocator.cc:39] Overriding allow\_growth setting because the TF\_FORCE\_GPU\_ALLOW\_GROWTH environment variable is set. Original config value was 0.

2020-08-04 09:59:03.546346: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/device:GPU:1 with 14969 MB memory) -> physical GPU (device: 1, name: Tesla P100-SXM2-16GB, pci bus id: 0000:06:00.0, compute capability: 6.0)

2020-08-04 09:59:03.548562: W tensorflow/core/common\_runtime/gpu/gpu\_bfc\_allocator.cc:39] Overriding allow\_growth setting because the TF\_FORCE\_GPU\_ALLOW\_GROWTH environment variable is set. Original config value was 0.

2020-08-04 09:59:03.548585: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/device:GPU:2 with 14969 MB memory) -> physical GPU (device: 2, name: Tesla P100-SXM2-16GB, pci bus id: 0000:07:00.0, compute capability: 6.0)

2020-08-04 09:59:03.550750: W tensorflow/core/common\_runtime/gpu/gpu\_bfc\_allocator.cc:39] Overriding allow\_growth setting because the TF\_FORCE\_GPU\_ALLOW\_GROWTH environment variable is set. Original config value was 0.

2020-08-04 09:59:03.550774: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/device:GPU:3 with 14969 MB memory) -> physical GPU (device: 3, name: Tesla P100-SXM2-16GB, pci bus id: 0000:08:00.0, compute capability: 6.0)

GPU is available

Using https://tfhub.dev/google/imagenet/mobilenet\_v2\_140\_224/feature\_vector/4 with input size (224, 224)

Found 62384 images belonging to 250 classes.

Found 15479 images belonging to 250 classes.

Building model with https://tfhub.dev/google/imagenet/mobilenet\_v2\_140\_224/feature\_vector/4

2020-08-04 09:59:07.030371: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 0 with properties:

pciBusID: 0000:04:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.031524: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 1 with properties:

pciBusID: 0000:06:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.032651: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 2 with properties:

pciBusID: 0000:07:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.033701: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 3 with properties:

pciBusID: 0000:08:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.033770: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudart.so.9.0

2020-08-04 09:59:07.033843: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcublas.so.9.0

2020-08-04 09:59:07.033885: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcufft.so.9.0

2020-08-04 09:59:07.033924: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcurand.so.9.0

2020-08-04 09:59:07.033963: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusolver.so.9.0

2020-08-04 09:59:07.034005: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusparse.so.9.0

2020-08-04 09:59:07.034044: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudnn.so.7

2020-08-04 09:59:07.043153: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1703] Adding visible gpu devices: 0, 1, 2, 3

2020-08-04 09:59:07.044522: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 0 with properties:

pciBusID: 0000:04:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.045609: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 1 with properties:

pciBusID: 0000:06:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.046676: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 2 with properties:

pciBusID: 0000:07:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.047731: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1561] Found device 3 with properties:

pciBusID: 0000:08:00.0 name: Tesla P100-SXM2-16GB computeCapability: 6.0

coreClock: 1.4805GHz coreCount: 56 deviceMemorySize: 15.90GiB deviceMemoryBandwidth: 681.88GiB/s

2020-08-04 09:59:07.047758: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudart.so.9.0

2020-08-04 09:59:07.047806: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcublas.so.9.0

2020-08-04 09:59:07.047865: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcufft.so.9.0

2020-08-04 09:59:07.047905: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcurand.so.9.0

2020-08-04 09:59:07.047943: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusolver.so.9.0

2020-08-04 09:59:07.047983: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcusparse.so.9.0

2020-08-04 09:59:07.048020: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudnn.so.7

2020-08-04 09:59:07.055402: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1703] Adding visible gpu devices: 0, 1, 2, 3

2020-08-04 09:59:07.055502: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1102] Device interconnect StreamExecutor with strength 1 edge matrix:

2020-08-04 09:59:07.055533: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1108] 0 1 2 3

2020-08-04 09:59:07.055542: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 0: N Y Y Y

2020-08-04 09:59:07.055564: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 1: Y N Y Y

2020-08-04 09:59:07.055585: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 2: Y Y N Y

2020-08-04 09:59:07.055608: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1121] 3: Y Y Y N

2020-08-04 09:59:07.060436: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/job:localhost/replica:0/task:0/device:GPU:0 with 14969 MB memory) -> physical GPU (device: 0, name: Tesla P100-SXM2-16GB, pci bus id: 0000:04:00.0, compute capability: 6.0)

2020-08-04 09:59:07.061494: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/job:localhost/replica:0/task:0/device:GPU:1 with 14969 MB memory) -> physical GPU (device: 1, name: Tesla P100-SXM2-16GB, pci bus id: 0000:06:00.0, compute capability: 6.0)

2020-08-04 09:59:07.062534: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/job:localhost/replica:0/task:0/device:GPU:2 with 14969 MB memory) -> physical GPU (device: 2, name: Tesla P100-SXM2-16GB, pci bus id: 0000:07:00.0, compute capability: 6.0)

2020-08-04 09:59:07.063587: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1247] Created TensorFlow device (/job:localhost/replica:0/task:0/device:GPU:3 with 14969 MB memory) -> physical GPU (device: 3, name: Tesla P100-SXM2-16GB, pci bus id: 0000:08:00.0, compute capability: 6.0)

2020-08-04 09:59:07.063631: I tensorflow/core/common\_runtime/process\_util.cc:147] Creating new thread pool with default inter op setting: 2. Tune using inter\_op\_parallelism\_threads for best performance.

W0804 09:59:09.395378 46912496467904 ag\_logging.py:146] AutoGraph could not transform <bound method KerasLayer.call of <tensorflow\_hub.keras\_layer.KerasLayer object at 0x2aab21e39f60>> and will run it as-is.

Please report this to the TensorFlow team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output.

Cause: module 'gast' has no attribute 'Constant'

To silence this warning, decorate the function with @tf.autograph.experimental.do\_not\_convert

Model: "sequential"

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Layer (type) Output Shape Param #

=================================================================

keras\_layer (KerasLayer) (None, 1792) 4363712

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

dense (Dense) (None, 250) 448250

=================================================================

Total params: 4,811,962

Trainable params: 448,250

Non-trainable params: 4,363,712

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/apps/python/3.7.2/lib/python3.7/site-packages/PIL/Image.py:989: UserWarning: Palette images with Transparency expressed in bytes should be converted to RGBA images

"Palette images with Transparency expressed in bytes should be "

Epoch 1/10

W0804 09:59:19.157556 46912496467904 ag\_logging.py:146] AutoGraph could not transform <function Model.make\_train\_function.<locals>.train\_function at 0x2aab7ebbe6a8> and will run it as-is.

Please report this to the TensorFlow team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output.

Cause: Bad argument number for Name: 4, expecting 3

To silence this warning, decorate the function with @tf.autograph.experimental.do\_not\_convert

2020-08-04 09:59:21.036642: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 132 in the outer inference context.

2020-08-04 09:59:21.036699: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 166 in the outer inference context.

2020-08-04 09:59:21.036857: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 108 in the outer inference context.

2020-08-04 09:59:21.036933: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 535 in the outer inference context.

2020-08-04 09:59:21.036982: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 559 in the outer inference context.

2020-08-04 09:59:21.037021: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 480 in the outer inference context.

2020-08-04 09:59:21.037087: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 524 in the outer inference context.

2020-08-04 09:59:21.037141: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 581 in the outer inference context.

2020-08-04 09:59:21.037200: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 613 in the outer inference context.

2020-08-04 09:59:21.037256: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 423 in the outer inference context.

2020-08-04 09:59:21.037296: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 635 in the outer inference context.

2020-08-04 09:59:21.037341: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 503 in the outer inference context.

2020-08-04 09:59:21.037423: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 469 in the outer inference context.

2020-08-04 09:59:21.037482: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 602 in the outer inference context.

2020-08-04 09:59:21.037522: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 570 in the outer inference context.

2020-08-04 09:59:21.037578: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 445 in the outer inference context.

2020-08-04 09:59:21.037616: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 413 in the outer inference context.

2020-08-04 09:59:21.037675: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 546 in the outer inference context.

2020-08-04 09:59:21.037735: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 624 in the outer inference context.

2020-08-04 09:59:21.037793: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 514 in the outer inference context.

2020-08-04 09:59:21.037830: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 492 in the outer inference context.

2020-08-04 09:59:21.037865: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 458 in the outer inference context.

2020-08-04 09:59:21.037941: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 267 in the outer inference context.

2020-08-04 09:59:21.038033: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 434 in the outer inference context.

2020-08-04 09:59:21.038069: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 155 in the outer inference context.

2020-08-04 09:59:21.038130: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 222 in the outer inference context.

2020-08-04 09:59:21.038166: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 256 in the outer inference context.

2020-08-04 09:59:21.038198: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 187 in the outer inference context.

2020-08-04 09:59:21.038243: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 646 in the outer inference context.

2020-08-04 09:59:21.038300: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 177 in the outer inference context.

2020-08-04 09:59:21.038340: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 391 in the outer inference context.

2020-08-04 09:59:21.038382: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 591 in the outer inference context.

2020-08-04 09:59:21.038458: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 76 in the outer inference context.

2020-08-04 09:59:21.038503: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 244 in the outer inference context.

2020-08-04 09:59:21.038562: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 368 in the outer inference context.

2020-08-04 09:59:21.038597: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 345 in the outer inference context.

2020-08-04 09:59:21.038741: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 334 in the outer inference context.

2020-08-04 09:59:21.038785: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 299 in the outer inference context.

2020-08-04 09:59:21.038828: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 402 in the outer inference context.

2020-08-04 09:59:21.038863: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 233 in the outer inference context.

2020-08-04 09:59:21.038896: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 209 in the outer inference context.

2020-08-04 09:59:21.038976: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 288 in the outer inference context.

2020-08-04 09:59:21.039020: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 357 in the outer inference context.

2020-08-04 09:59:21.039060: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 310 in the outer inference context.

2020-08-04 09:59:21.039095: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 278 in the outer inference context.

2020-08-04 09:59:21.039131: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 379 in the outer inference context.

2020-08-04 09:59:21.039206: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 97 in the outer inference context.

2020-08-04 09:59:21.039238: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 86 in the outer inference context.

2020-08-04 09:59:21.039292: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 323 in the outer inference context.

2020-08-04 09:59:21.039331: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 121 in the outer inference context.

2020-08-04 09:59:21.039486: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 143 in the outer inference context.

2020-08-04 09:59:21.039531: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 198 in the outer inference context.

2020-08-04 09:59:21.337985: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 591 in the outer inference context.

2020-08-04 09:59:21.338052: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 559 in the outer inference context.

2020-08-04 09:59:21.338143: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 535 in the outer inference context.

2020-08-04 09:59:21.338193: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 646 in the outer inference context.

2020-08-04 09:59:21.338270: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 581 in the outer inference context.

2020-08-04 09:59:21.338338: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 613 in the outer inference context.

2020-08-04 09:59:21.338386: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 480 in the outer inference context.

2020-08-04 09:59:21.338464: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 524 in the outer inference context.

2020-08-04 09:59:21.338548: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 635 in the outer inference context.

2020-08-04 09:59:21.338606: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 503 in the outer inference context.

2020-08-04 09:59:21.338654: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 434 in the outer inference context.

2020-08-04 09:59:21.338702: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 602 in the outer inference context.

2020-08-04 09:59:21.338758: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 469 in the outer inference context.

2020-08-04 09:59:21.338811: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 624 in the outer inference context.

2020-08-04 09:59:21.338859: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 570 in the outer inference context.

2020-08-04 09:59:21.338906: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 492 in the outer inference context.

2020-08-04 09:59:21.338962: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 402 in the outer inference context.

2020-08-04 09:59:21.339012: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 546 in the outer inference context.

2020-08-04 09:59:21.339051: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 514 in the outer inference context.

2020-08-04 09:59:21.339105: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 445 in the outer inference context.

2020-08-04 09:59:21.339179: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 458 in the outer inference context.

2020-08-04 09:59:21.339221: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 423 in the outer inference context.

2020-08-04 09:59:21.339286: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 267 in the outer inference context.

2020-08-04 09:59:21.339338: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 391 in the outer inference context.

2020-08-04 09:59:21.339392: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 323 in the outer inference context.

2020-08-04 09:59:21.339451: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 413 in the outer inference context.

2020-08-04 09:59:21.339496: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 368 in the outer inference context.

2020-08-04 09:59:21.339531: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 345 in the outer inference context.

2020-08-04 09:59:21.339573: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 299 in the outer inference context.

2020-08-04 09:59:21.339705: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 256 in the outer inference context.

2020-08-04 09:59:21.339744: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 209 in the outer inference context.

2020-08-04 09:59:21.339789: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 357 in the outer inference context.

2020-08-04 09:59:21.339826: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 334 in the outer inference context.

2020-08-04 09:59:21.339868: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 288 in the outer inference context.

2020-08-04 09:59:21.339916: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 379 in the outer inference context.

2020-08-04 09:59:21.339986: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 198 in the outer inference context.

2020-08-04 09:59:21.340033: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 310 in the outer inference context.

2020-08-04 09:59:21.340088: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 244 in the outer inference context.

2020-08-04 09:59:21.340127: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 222 in the outer inference context.

2020-08-04 09:59:21.340181: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 278 in the outer inference context.

2020-08-04 09:59:21.340277: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 166 in the outer inference context.

2020-08-04 09:59:21.340330: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 233 in the outer inference context.

2020-08-04 09:59:21.340396: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 97 in the outer inference context.

2020-08-04 09:59:21.340439: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 187 in the outer inference context.

2020-08-04 09:59:21.340481: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 143 in the outer inference context.

2020-08-04 09:59:21.340517: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 121 in the outer inference context.

2020-08-04 09:59:21.340622: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 155 in the outer inference context.

2020-08-04 09:59:21.340674: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 86 in the outer inference context.

2020-08-04 09:59:21.340718: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 132 in the outer inference context.

2020-08-04 09:59:21.340778: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 108 in the outer inference context.

2020-08-04 09:59:21.340853: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 76 in the outer inference context.

2020-08-04 09:59:21.340950: W tensorflow/core/common\_runtime/shape\_refiner.cc:88] Function instantiation has undefined input shape at index: 177 in the outer inference context.

2020-08-04 09:59:22.428555: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcublas.so.9.0

2020-08-04 09:59:22.828620: I tensorflow/stream\_executor/platform/default/dso\_loader.cc:44] Successfully opened dynamic library libcudnn.so.7

2020-08-04 09:59:23.807913: W tensorflow/stream\_executor/gpu/asm\_compiler.cc:116] \*\*\* WARNING \*\*\* You are using ptxas 9.0.424, which is older than 9.2.88. ptxas 9.x before 9.2.88 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

You do not need to update to CUDA 9.2.88; cherry-picking the ptxas binary is sufficient.

107/487 [=====>........................] - ETA: 1:02:03 - loss: 4.0221 - categorical\_accuracy: 0.3335/apps/python/3.7.2/lib/python3.7/site-packages/PIL/TiffImagePlugin.py:802: UserWarning: Corrupt EXIF data. Expecting to read 2 bytes but only got 0.

233/487 [=============>................] - ETA: 40:49 - loss: 3.2747 - categorical\_accuracy: 0.4945/apps/python/3.7.2/lib/python3.7/site-packages/PIL/TiffImagePlugin.py:802: UserWarning: Corrupt EXIF data. Expecting to read 12 bytes but only got 10.

242/487 [=============>................] - ETA: 39:24 - loss: 3.2452 - categorical\_accuracy: 0.5013/apps/python/3.7.2/lib/python3.7/site-packages/PIL/TiffImagePlugin.py:802: UserWarning: Corrupt EXIF data. Expecting to read 4 bytes but only got 0.

456/487 [===========================>..] - ETA: 5:00 - loss: 2.8443 - categorical\_accuracy: 0.5862/apps/python/3.7.2/lib/python3.7/site-packages/PIL/TiffImagePlugin.py:784: UserWarning: Possibly corrupt EXIF data. Expecting to read 12 bytes but only got 10. Skipping tag 42037

487/487 [==============================] - ETA: 0s - loss: 2.8021 - categorical\_accuracy: 0.5933W0804 11:18:28.383817 46912496467904 ag\_logging.py:146] AutoGraph could not transform <function Model.make\_test\_function.<locals>.test\_function at 0x2aab7ec32bf8> and will run it as-is.

Please report this to the TensorFlow team. When filing the bug, set the verbosity to 10 (on Linux, `export AUTOGRAPH\_VERBOSITY=10`) and attach the full output.

Cause: Bad argument number for Name: 4, expecting 3

To silence this warning, decorate the function with @tf.autograph.experimental.do\_not\_convert

487/487 [==============================] - 5825s 12s/step - loss: 2.8021 - categorical\_a ccuracy: 0.5933 - val\_loss: 2.0348 - val\_categorical\_accuracy: 0.7385 - lr: 0.0050

Epoch 2/10

487/487 [==============================] - ETA: 0s - loss: 1.9390 - categorical\_accuracy: 0.7524W0804 13:06:22.804610 46912496467904 callbacks.p 487/487 [==============================] - 5393s 11s/step - loss: 1.9390 - categorical\_accuracy: 0.7524 - val\_loss: 1.8925 - val\_categorical\_acc uracy: 0.7696 - lr: 0.0050

Epoch 3/10

487/487 [==============================] - ETA: 0s - loss: 1.8167 - categorical\_accuracy: 0.7833W0804 14:34:10.991556 46912496467904 callbacks.p 487/487 [==============================] - 5268s 11s/step - loss: 1.8167 - categorical\_accuracy: 0.7833 - val\_loss: 1.8628 - val\_categorical\_acc uracy: 0.7767 - lr: 0.0050

Epoch 4/10

487/487 [==============================] - ETA: 0s - loss: 1.7401 - categorical\_accuracy: 0.8067W0804 16:19:13.345906 46912496467904 callbacks.p 487/487 [==============================] - 6302s 13s/step - loss: 1.7401 - categorical\_accuracy: 0.8067 - val\_loss: 1.8491 - val\_categorical\_acc uracy: 0.7829 - lr: 0.0050

Epoch 5/10

487/487 [==============================] - ETA: 0s - loss: 1.7046 - categorical\_accuracy: 0.8191

Epoch 00005: ReduceLROnPlateau reducing learning rate to 0.0009999999776482583.

487/487 [==============================] - 6202s 13s/step - loss: 1.7046 - categorical\_accuracy: 0.8191 - val\_loss: 1.8698 - val\_categorical\_acc uracy: 0.7822 - lr: 0.0050

Epoch 6/10

487/487 [==============================] - ETA: 0s - loss: 1.6371 - categorical\_accuracy: 0.8410W0804 19:33:18.343254 46912496467904 callbacks.p 487/487 [==============================] - 5443s 11s/step - loss: 1.6371 - categorical\_accuracy: 0.8410 - val\_loss: 1.7921 - val\_categorical\_acc uracy: 0.7977 - lr: 1.0000e-03

Epoch 7/10

487/487 [==============================] - ETA: 0s - loss: 1.5585 - categorical\_accuracy: 0.8680W0804 21:03:30.645238 46912496467904 callbacks.p 487/487 [==============================] - 5412s 11s/step - loss: 1.5585 - categorical\_accuracy: 0.8680 - val\_loss: 1.7783 - val\_categorical\_acc uracy: 0.8020 - lr: 1.0000e-03

Epoch 8/10

487/487 [==============================] - ETA: 0s - loss: 1.5399 - categorical\_accuracy: 0.8724W0804 22:30:04.351157 46912496467904 callbacks.py:1203] Can save best model only 487/487 [==============================] - 5194s 11s/step - loss: 1.5399 - categorical\_accuracy: 0.8724 - val\_loss: 1.7705 - val\_categorical\_accuracy: 0.8027 - lr: 1.0000e-03

Epoch 9/10

487/487 [==============================] - ETA: 0s - loss: 1.5327 - categorical\_accuracy: 0.8764Traceback (most recent call last):

File "train2.py", line 104, in <module>

validation\_steps=validation\_steps, callbacks=callbacks)

File "/apps/tensorflow/2.2.0-py37-gcc5-gpu/lib/python3.7/site-packages/tensorflow/python/keras/engine/training.py", line 66, in \_method\_wrapper

return method(self, \*args, \*\*kwargs)

File "/apps/tensorflow/2.2.0-py37-gcc5-gpu/lib/python3.7/site-packages/tensorflow/python/keras/engine/training.py", line 876, in fit

callbacks.on\_epoch\_end(epoch, epoch\_logs)

File "/apps/tensorflow/2.2.0-py37-gcc5-gpu/lib/python3.7/site-packages/tensorflow/python/keras/callbacks.py", line 365, in on\_epoch\_end

callback.on\_epoch\_end(epoch, logs)

File "/apps/tensorflow/2.2.0-py37-gcc5-gpu/lib/python3.7/site-packages/tensorflow/python/keras/callbacks.py", line 2363, in on\_epoch\_end

self.csv\_file.flush()

PermissionError: [Errno 13] Permission denied

2020-08-04 23:57:55.836916: W tensorflow/core/kernels/data/generator\_dataset\_op.cc:103] Error occurred when finalizing GeneratorDataset iterator: Failed precondition: Python in terpreter state is not initialized. The process may be terminated.

[[{{node PyFunc}}]]