Using provided s3\_resource

INFO:sagemaker:Creating training-job with name: tf2-object-detection-2023-08-20-02-40-07-675

2023-08-20 02:40:18 Starting - Starting the training job...

2023-08-20 02:40:33 Starting - Preparing the instances for training......

2023-08-20 02:41:25 Downloading - Downloading input data...

2023-08-20 02:41:50 Training - Downloading the training image......

2023-08-20 02:43:11 Training - Training image download completed. Training in progress....2023-08-20 02:43:37,677 sagemaker-training-toolkit INFO No GPUs detected (normal if no gpus installed)

2023-08-20 02:43:37,679 sagemaker-training-toolkit INFO No Neurons detected (normal if no neurons installed)

2023-08-20 02:43:37,691 sagemaker-training-toolkit INFO No GPUs detected (normal if no gpus installed)

2023-08-20 02:43:37,693 sagemaker-training-toolkit INFO No Neurons detected (normal if no neurons installed)

2023-08-20 02:43:37,704 sagemaker-training-toolkit INFO No GPUs detected (normal if no gpus installed)

2023-08-20 02:43:37,706 sagemaker-training-toolkit INFO No Neurons detected (normal if no neurons installed)

2023-08-20 02:43:37,716 sagemaker-training-toolkit INFO Invoking user script

Training Env:

{

"additional\_framework\_parameters": {},

"channel\_input\_dirs": {

"train": "/opt/ml/input/data/train",

"val": "/opt/ml/input/data/val"

},

"current\_host": "algo-1",

"current\_instance\_group": "homogeneousCluster",

"current\_instance\_group\_hosts": [

"algo-1"

],

"current\_instance\_type": "ml.trn1.2xlarge",

"distribution\_hosts": [],

"distribution\_instance\_groups": [],

"framework\_module": null,

"hosts": [

"algo-1"

],

"hyperparameters": {

"model\_dir": "/opt/training",

"num\_train\_steps": "2000",

"pipeline\_config\_path": "pipeline.config",

"sample\_1\_of\_n\_eval\_examples": "1"

},

"input\_config\_dir": "/opt/ml/input/config",

"input\_data\_config": {

"train": {

"TrainingInputMode": "File",

"S3DistributionType": "FullyReplicated",

"RecordWrapperType": "None"

},

"val": {

"TrainingInputMode": "File",

"S3DistributionType": "FullyReplicated",

"RecordWrapperType": "None"

}

},

"input\_dir": "/opt/ml/input",

"instance\_groups": [

"homogeneousCluster"

],

"instance\_groups\_dict": {

"homogeneousCluster": {

"instance\_group\_name": "homogeneousCluster",

"instance\_type": "ml.trn1.2xlarge",

"hosts": [

"algo-1"

]

}

},

"is\_hetero": false,

"is\_master": true,

"is\_modelparallel\_enabled": null,

"is\_smddpmprun\_installed": false,

"job\_name": "tf2-object-detection-2023-08-20-02-40-07-675",

"log\_level": 20,

"master\_hostname": "algo-1",

"model\_dir": "/opt/ml/model",

"module\_dir": "s3://sagemaker-us-east-1-789453636658/tf2-object-detection-2023-08-20-02-40-07-675/source/sourcedir.tar.gz",

"module\_name": "run\_training.sh",

"network\_interface\_name": "eth0",

"num\_cpus": 8,

"num\_gpus": 0,

"num\_neurons": 0,

"output\_data\_dir": "/opt/ml/output/data",

"output\_dir": "/opt/ml/output",

"output\_intermediate\_dir": "/opt/ml/output/intermediate",

"resource\_config": {

"current\_host": "algo-1",

"current\_instance\_type": "ml.trn1.2xlarge",

"current\_group\_name": "homogeneousCluster",

"hosts": [

"algo-1"

],

"instance\_groups": [

{

"instance\_group\_name": "homogeneousCluster",

"instance\_type": "ml.trn1.2xlarge",

"hosts": [

"algo-1"

]

}

],

"network\_interface\_name": "eth0"

},

"user\_entry\_point": "run\_training.sh"

}

Environment variables:

SM\_HOSTS=["algo-1"]

SM\_NETWORK\_INTERFACE\_NAME=eth0

SM\_HPS={"model\_dir":"/opt/training","num\_train\_steps":"2000","pipeline\_config\_path":"pipeline.config","sample\_1\_of\_n\_eval\_examples":"1"}

SM\_USER\_ENTRY\_POINT=run\_training.sh

SM\_FRAMEWORK\_PARAMS={}

SM\_RESOURCE\_CONFIG={"current\_group\_name":"homogeneousCluster","current\_host":"algo-1","current\_instance\_type":"ml.trn1.2xlarge","hosts":["algo-1"],"instance\_groups":[{"hosts":["algo-1"],"instance\_group\_name":"homogeneousCluster","instance\_type":"ml.trn1.2xlarge"}],"network\_interface\_name":"eth0"}

SM\_INPUT\_DATA\_CONFIG={"train":{"RecordWrapperType":"None","S3DistributionType":"FullyReplicated","TrainingInputMode":"File"},"val":{"RecordWrapperType":"None","S3DistributionType":"FullyReplicated","TrainingInputMode":"File"}}

SM\_OUTPUT\_DATA\_DIR=/opt/ml/output/data

SM\_CHANNELS=["train","val"]

SM\_CURRENT\_HOST=algo-1

SM\_CURRENT\_INSTANCE\_TYPE=ml.trn1.2xlarge

SM\_CURRENT\_INSTANCE\_GROUP=homogeneousCluster

SM\_CURRENT\_INSTANCE\_GROUP\_HOSTS=["algo-1"]

SM\_INSTANCE\_GROUPS=["homogeneousCluster"]

SM\_INSTANCE\_GROUPS\_DICT={"homogeneousCluster":{"hosts":["algo-1"],"instance\_group\_name":"homogeneousCluster","instance\_type":"ml.trn1.2xlarge"}}

SM\_DISTRIBUTION\_INSTANCE\_GROUPS=[]

SM\_IS\_HETERO=false

SM\_MODULE\_NAME=run\_training.sh

SM\_LOG\_LEVEL=20

SM\_FRAMEWORK\_MODULE=

SM\_INPUT\_DIR=/opt/ml/input

SM\_INPUT\_CONFIG\_DIR=/opt/ml/input/config

SM\_OUTPUT\_DIR=/opt/ml/output

SM\_NUM\_CPUS=8

SM\_NUM\_GPUS=0

SM\_NUM\_NEURONS=0

SM\_MODEL\_DIR=/opt/ml/model

SM\_MODULE\_DIR=s3://sagemaker-us-east-1-789453636658/tf2-object-detection-2023-08-20-02-40-07-675/source/sourcedir.tar.gz

SM\_TRAINING\_ENV={"additional\_framework\_parameters":{},"channel\_input\_dirs":{"train":"/opt/ml/input/data/train","val":"/opt/ml/input/data/val"},"current\_host":"algo-1","current\_instance\_group":"homogeneousCluster","current\_instance\_group\_hosts":["algo-1"],"current\_instance\_type":"ml.trn1.2xlarge","distribution\_hosts":[],"distribution\_instance\_groups":[],"framework\_module":null,"hosts":["algo-1"],"hyperparameters":{"model\_dir":"/opt/training","num\_train\_steps":"2000","pipeline\_config\_path":"pipeline.config","sample\_1\_of\_n\_eval\_examples":"1"},"input\_config\_dir":"/opt/ml/input/config","input\_data\_config":{"train":{"RecordWrapperType":"None","S3DistributionType":"FullyReplicated","TrainingInputMode":"File"},"val":{"RecordWrapperType":"None","S3DistributionType":"FullyReplicated","TrainingInputMode":"File"}},"input\_dir":"/opt/ml/input","instance\_groups":["homogeneousCluster"],"instance\_groups\_dict":{"homogeneousCluster":{"hosts":["algo-1"],"instance\_group\_name":"homogeneousCluster","instance\_type":"ml.trn1.2xlarge"}},"is\_hetero":false,"is\_master":true,"is\_modelparallel\_enabled":null,"is\_smddpmprun\_installed":false,"job\_name":"tf2-object-detection-2023-08-20-02-40-07-675","log\_level":20,"master\_hostname":"algo-1","model\_dir":"/opt/ml/model","module\_dir":"s3://sagemaker-us-east-1-789453636658/tf2-object-detection-2023-08-20-02-40-07-675/source/sourcedir.tar.gz","module\_name":"run\_training.sh","network\_interface\_name":"eth0","num\_cpus":8,"num\_gpus":0,"num\_neurons":0,"output\_data\_dir":"/opt/ml/output/data","output\_dir":"/opt/ml/output","output\_intermediate\_dir":"/opt/ml/output/intermediate","resource\_config":{"current\_group\_name":"homogeneousCluster","current\_host":"algo-1","current\_instance\_type":"ml.trn1.2xlarge","hosts":["algo-1"],"instance\_groups":[{"hosts":["algo-1"],"instance\_group\_name":"homogeneousCluster","instance\_type":"ml.trn1.2xlarge"}],"network\_interface\_name":"eth0"},"user\_entry\_point":"run\_training.sh"}

SM\_USER\_ARGS=["--model\_dir","/opt/training","--num\_train\_steps","2000","--pipeline\_config\_path","pipeline.config","--sample\_1\_of\_n\_eval\_examples","1"]

SM\_OUTPUT\_INTERMEDIATE\_DIR=/opt/ml/output/intermediate

SM\_CHANNEL\_TRAIN=/opt/ml/input/data/train

SM\_CHANNEL\_VAL=/opt/ml/input/data/val

SM\_HP\_MODEL\_DIR=/opt/training

SM\_HP\_NUM\_TRAIN\_STEPS=2000

SM\_HP\_PIPELINE\_CONFIG\_PATH=pipeline.config

SM\_HP\_SAMPLE\_1\_OF\_N\_EVAL\_EXAMPLES=1

PYTHONPATH=/opt/ml/code:/usr/local/bin:/usr/lib/python38.zip:/usr/lib/python3.8:/usr/lib/python3.8/lib-dynload:/usr/local/lib/python3.8/dist-packages:/usr/lib/python3/dist-packages

Invoking script with the following command:

/bin/sh -c "./run\_training.sh --model\_dir /opt/training --num\_train\_steps 2000 --pipeline\_config\_path pipeline.config --sample\_1\_of\_n\_eval\_examples 1"

2023-08-20 02:43:37,716 sagemaker-training-toolkit INFO Exceptions not imported for SageMaker Debugger as it is not installed.

===TRAINING THE MODEL==

INFO:tensorflow:Using MirroredStrategy with devices ('/job:localhost/replica:0/task:0/device:CPU:0',)

I0820 02:43:42.292054 140458478384960 mirrored\_strategy.py:419] Using MirroredStrategy with devices ('/job:localhost/replica:0/task:0/device:CPU:0',)

INFO:tensorflow:Maybe overwriting train\_steps: 2000

I0820 02:43:42.311692 140458478384960 config\_util.py:552] Maybe overwriting train\_steps: 2000

INFO:tensorflow:Maybe overwriting use\_bfloat16: False

I0820 02:43:42.311808 140458478384960 config\_util.py:552] Maybe overwriting use\_bfloat16: False

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/object\_detection/model\_lib\_v2.py:563: StrategyBase.experimental\_distribute\_datasets\_from\_function (from tensorflow.python.distribute.distribute\_lib) is deprecated and will be removed in a future version.

Instructions for updating:

rename to distribute\_datasets\_from\_function

W0820 02:43:42.339960 140458478384960 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/object\_detection/model\_lib\_v2.py:563: StrategyBase.experimental\_distribute\_datasets\_from\_function (from tensorflow.python.distribute.distribute\_lib) is deprecated and will be removed in a future version.

Instructions for updating:

rename to distribute\_datasets\_from\_function

INFO:tensorflow:Reading unweighted datasets: ['/opt/ml/input/data/train/\*.tfrecord']

I0820 02:43:42.346132 140458478384960 dataset\_builder.py:162] Reading unweighted datasets: ['/opt/ml/input/data/train/\*.tfrecord']

INFO:tensorflow:Reading record datasets for input file: ['/opt/ml/input/data/train/\*.tfrecord']

I0820 02:43:42.347292 140458478384960 dataset\_builder.py:79] Reading record datasets for input file: ['/opt/ml/input/data/train/\*.tfrecord']

INFO:tensorflow:Number of filenames to read: 84

I0820 02:43:42.347368 140458478384960 dataset\_builder.py:80] Number of filenames to read: 84

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:100: parallel\_interleave (from tensorflow.python.data.experimental.ops.interleave\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.interleave(map\_func, cycle\_length, block\_length, num\_parallel\_calls=tf.data.AUTOTUNE)` instead. If sloppy execution is desired, use `tf.data.Options.deterministic`.

W0820 02:43:42.354326 140458478384960 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:100: parallel\_interleave (from tensorflow.python.data.experimental.ops.interleave\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.interleave(map\_func, cycle\_length, block\_length, num\_parallel\_calls=tf.data.AUTOTUNE)` instead. If sloppy execution is desired, use `tf.data.Options.deterministic`.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:235: DatasetV1.map\_with\_legacy\_function (from tensorflow.python.data.ops.dataset\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.map()

W0820 02:43:42.369172 140458478384960 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:235: DatasetV1.map\_with\_legacy\_function (from tensorflow.python.data.ops.dataset\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.map()

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: sparse\_to\_dense (from tensorflow.python.ops.sparse\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Create a `tf.sparse.SparseTensor` and use `tf.sparse.to\_dense` instead.

W0820 02:43:48.090100 140458478384960 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: sparse\_to\_dense (from tensorflow.python.ops.sparse\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Create a `tf.sparse.SparseTensor` and use `tf.sparse.to\_dense` instead.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_float (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

W0820 02:43:51.263307 140458478384960 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_float (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

/usr/local/lib/python3.8/dist-packages/keras/src/backend.py:452: UserWarning: `tf.keras.backend.set\_learning\_phase` is deprecated and will be removed after 2020-10-11. To update it, simply pass a True/False value to the `training` argument of the `\_\_call\_\_` method of your layer or model.

warnings.warn(

INFO:tensorflow:depth of additional conv before box predictor: 0

I0820 02:43:58.276371 140454056150784 convolutional\_keras\_box\_predictor.py:152] depth of additional conv before box predictor: 0

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

W0820 02:44:07.016187 140454056150784 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: softmax\_cross\_entropy\_with\_logits (from tensorflow.python.ops.nn\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Future major versions of TensorFlow will allow gradients to flow

into the labels input on backprop by default.

See `tf.nn.softmax\_cross\_entropy\_with\_logits\_v2`.

W0820 02:44:11.902180 140454056150784 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: softmax\_cross\_entropy\_with\_logits (from tensorflow.python.ops.nn\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Future major versions of TensorFlow will allow gradients to flow

into the labels input on backprop by default.

See `tf.nn.softmax\_cross\_entropy\_with\_logits\_v2`.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/deprecation.py:648: calling map\_fn\_v2 (from tensorflow.python.ops.map\_fn) with dtype is deprecated and will be removed in a future version.

Instructions for updating:

Use fn\_output\_signature instead

W0820 02:44:30.960252 140453441681152 deprecation.py:569] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/deprecation.py:648: calling map\_fn\_v2 (from tensorflow.python.ops.map\_fn) with dtype is deprecated and will be removed in a future version.

Instructions for updating:

Use fn\_output\_signature instead

INFO:tensorflow:Step 100 per-step time 6.284s

I0820 02:54:59.054122 140458478384960 model\_lib\_v2.py:705] Step 100 per-step time 6.284s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.17327721,

'Loss/BoxClassifierLoss/localization\_loss': 0.3798557,

'Loss/RPNLoss/localization\_loss': 0.3973377,

'Loss/RPNLoss/objectness\_loss': 0.106684476,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0571551,

'learning\_rate': 0.00416}

I0820 02:54:59.054437 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.17327721,

'Loss/BoxClassifierLoss/localization\_loss': 0.3798557,

'Loss/RPNLoss/localization\_loss': 0.3973377,

'Loss/RPNLoss/objectness\_loss': 0.106684476,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0571551,

'learning\_rate': 0.00416}

INFO:tensorflow:Step 200 per-step time 5.683s

I0820 03:04:27.353221 140458478384960 model\_lib\_v2.py:705] Step 200 per-step time 5.683s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.17242545,

'Loss/BoxClassifierLoss/localization\_loss': 0.2768705,

'Loss/RPNLoss/localization\_loss': 0.56285226,

'Loss/RPNLoss/objectness\_loss': 0.1632953,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.1754434,

'learning\_rate': 0.0073200003}

I0820 03:04:27.353491 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.17242545,

'Loss/BoxClassifierLoss/localization\_loss': 0.2768705,

'Loss/RPNLoss/localization\_loss': 0.56285226,

'Loss/RPNLoss/objectness\_loss': 0.1632953,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.1754434,

'learning\_rate': 0.0073200003}

INFO:tensorflow:Step 300 per-step time 5.688s

I0820 03:13:56.174696 140458478384960 model\_lib\_v2.py:705] Step 300 per-step time 5.688s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.17416061,

'Loss/BoxClassifierLoss/localization\_loss': 0.26477236,

'Loss/RPNLoss/localization\_loss': 0.512208,

'Loss/RPNLoss/objectness\_loss': 0.038987726,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.99012864,

'learning\_rate': 0.010480001}

I0820 03:13:56.174990 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.17416061,

'Loss/BoxClassifierLoss/localization\_loss': 0.26477236,

'Loss/RPNLoss/localization\_loss': 0.512208,

'Loss/RPNLoss/objectness\_loss': 0.038987726,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.99012864,

'learning\_rate': 0.010480001}

INFO:tensorflow:Step 400 per-step time 5.738s

I0820 03:23:29.945598 140458478384960 model\_lib\_v2.py:705] Step 400 per-step time 5.738s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.17326975,

'Loss/BoxClassifierLoss/localization\_loss': 0.32288405,

'Loss/RPNLoss/localization\_loss': 0.39969224,

'Loss/RPNLoss/objectness\_loss': 0.07901467,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.97486067,

'learning\_rate': 0.0136400005}

I0820 03:23:29.945861 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.17326975,

'Loss/BoxClassifierLoss/localization\_loss': 0.32288405,

'Loss/RPNLoss/localization\_loss': 0.39969224,

'Loss/RPNLoss/objectness\_loss': 0.07901467,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.97486067,

'learning\_rate': 0.0136400005}

INFO:tensorflow:Step 500 per-step time 5.691s

I0820 03:32:59.032438 140458478384960 model\_lib\_v2.py:705] Step 500 per-step time 5.691s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.23999529,

'Loss/BoxClassifierLoss/localization\_loss': 0.49208936,

'Loss/RPNLoss/localization\_loss': 0.31907982,

'Loss/RPNLoss/objectness\_loss': 0.030445233,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0816097,

'learning\_rate': 0.016800001}

I0820 03:32:59.032696 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.23999529,

'Loss/BoxClassifierLoss/localization\_loss': 0.49208936,

'Loss/RPNLoss/localization\_loss': 0.31907982,

'Loss/RPNLoss/objectness\_loss': 0.030445233,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0816097,

'learning\_rate': 0.016800001}

INFO:tensorflow:Step 600 per-step time 5.685s

I0820 03:42:27.484549 140458478384960 model\_lib\_v2.py:705] Step 600 per-step time 5.685s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.12119347,

'Loss/BoxClassifierLoss/localization\_loss': 0.24820256,

'Loss/RPNLoss/localization\_loss': 0.36003608,

'Loss/RPNLoss/objectness\_loss': 0.0392582,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.7686903,

'learning\_rate': 0.019960001}

I0820 03:42:27.484817 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.12119347,

'Loss/BoxClassifierLoss/localization\_loss': 0.24820256,

'Loss/RPNLoss/localization\_loss': 0.36003608,

'Loss/RPNLoss/objectness\_loss': 0.0392582,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.7686903,

'learning\_rate': 0.019960001}

INFO:tensorflow:Step 700 per-step time 5.689s

I0820 03:51:56.377803 140458478384960 model\_lib\_v2.py:705] Step 700 per-step time 5.689s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.25095803,

'Loss/BoxClassifierLoss/localization\_loss': 0.58728886,

'Loss/RPNLoss/localization\_loss': 0.41139287,

'Loss/RPNLoss/objectness\_loss': 0.047322243,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.296962,

'learning\_rate': 0.023120001}

I0820 03:51:56.378090 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.25095803,

'Loss/BoxClassifierLoss/localization\_loss': 0.58728886,

'Loss/RPNLoss/localization\_loss': 0.41139287,

'Loss/RPNLoss/objectness\_loss': 0.047322243,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.296962,

'learning\_rate': 0.023120001}

INFO:tensorflow:Step 800 per-step time 5.691s

I0820 04:01:25.464181 140458478384960 model\_lib\_v2.py:705] Step 800 per-step time 5.691s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.14922914,

'Loss/BoxClassifierLoss/localization\_loss': 0.33992624,

'Loss/RPNLoss/localization\_loss': 0.2548422,

'Loss/RPNLoss/objectness\_loss': 0.06856901,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.81256664,

'learning\_rate': 0.02628}

I0820 04:01:25.464452 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.14922914,

'Loss/BoxClassifierLoss/localization\_loss': 0.33992624,

'Loss/RPNLoss/localization\_loss': 0.2548422,

'Loss/RPNLoss/objectness\_loss': 0.06856901,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.81256664,

'learning\_rate': 0.02628}

INFO:tensorflow:Step 900 per-step time 5.684s

I0820 04:10:53.874034 140458478384960 model\_lib\_v2.py:705] Step 900 per-step time 5.684s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.18781611,

'Loss/BoxClassifierLoss/localization\_loss': 0.29583448,

'Loss/RPNLoss/localization\_loss': 0.44821492,

'Loss/RPNLoss/objectness\_loss': 0.04189685,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.9737624,

'learning\_rate': 0.02944}

I0820 04:10:53.874288 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.18781611,

'Loss/BoxClassifierLoss/localization\_loss': 0.29583448,

'Loss/RPNLoss/localization\_loss': 0.44821492,

'Loss/RPNLoss/objectness\_loss': 0.04189685,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.9737624,

'learning\_rate': 0.02944}

INFO:tensorflow:Step 1000 per-step time 5.690s

I0820 04:20:22.846753 140458478384960 model\_lib\_v2.py:705] Step 1000 per-step time 5.690s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.1910228,

'Loss/BoxClassifierLoss/localization\_loss': 0.46315178,

'Loss/RPNLoss/localization\_loss': 0.3552394,

'Loss/RPNLoss/objectness\_loss': 0.05189567,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0613096,

'learning\_rate': 0.0326}

I0820 04:20:22.847028 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.1910228,

'Loss/BoxClassifierLoss/localization\_loss': 0.46315178,

'Loss/RPNLoss/localization\_loss': 0.3552394,

'Loss/RPNLoss/objectness\_loss': 0.05189567,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0613096,

'learning\_rate': 0.0326}

INFO:tensorflow:Step 1100 per-step time 5.696s

I0820 04:29:52.462790 140458478384960 model\_lib\_v2.py:705] Step 1100 per-step time 5.696s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.2188052,

'Loss/BoxClassifierLoss/localization\_loss': 0.50065494,

'Loss/RPNLoss/localization\_loss': 0.37414473,

'Loss/RPNLoss/objectness\_loss': 0.055877097,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.149482,

'learning\_rate': 0.03576}

I0820 04:29:52.463057 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.2188052,

'Loss/BoxClassifierLoss/localization\_loss': 0.50065494,

'Loss/RPNLoss/localization\_loss': 0.37414473,

'Loss/RPNLoss/objectness\_loss': 0.055877097,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.149482,

'learning\_rate': 0.03576}

INFO:tensorflow:Step 1200 per-step time 5.697s

I0820 04:39:22.204850 140458478384960 model\_lib\_v2.py:705] Step 1200 per-step time 5.697s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.18872604,

'Loss/BoxClassifierLoss/localization\_loss': 0.48234588,

'Loss/RPNLoss/localization\_loss': 0.5154278,

'Loss/RPNLoss/objectness\_loss': 0.0489013,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.235401,

'learning\_rate': 0.03892}

I0820 04:39:22.205121 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.18872604,

'Loss/BoxClassifierLoss/localization\_loss': 0.48234588,

'Loss/RPNLoss/localization\_loss': 0.5154278,

'Loss/RPNLoss/objectness\_loss': 0.0489013,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.235401,

'learning\_rate': 0.03892}

INFO:tensorflow:Step 1300 per-step time 5.695s

I0820 04:48:51.745713 140458478384960 model\_lib\_v2.py:705] Step 1300 per-step time 5.695s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.19903432,

'Loss/BoxClassifierLoss/localization\_loss': 0.3252017,

'Loss/RPNLoss/localization\_loss': 0.57699263,

'Loss/RPNLoss/objectness\_loss': 0.16493806,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.2661667,

'learning\_rate': 0.04208}

I0820 04:48:51.746014 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.19903432,

'Loss/BoxClassifierLoss/localization\_loss': 0.3252017,

'Loss/RPNLoss/localization\_loss': 0.57699263,

'Loss/RPNLoss/objectness\_loss': 0.16493806,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.2661667,

'learning\_rate': 0.04208}

INFO:tensorflow:Step 1400 per-step time 5.697s

I0820 04:58:21.483936 140458478384960 model\_lib\_v2.py:705] Step 1400 per-step time 5.697s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.24984676,

'Loss/BoxClassifierLoss/localization\_loss': 0.45980301,

'Loss/RPNLoss/localization\_loss': 0.49384785,

'Loss/RPNLoss/objectness\_loss': 0.058843136,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.2623408,

'learning\_rate': 0.04524}

I0820 04:58:21.484199 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.24984676,

'Loss/BoxClassifierLoss/localization\_loss': 0.45980301,

'Loss/RPNLoss/localization\_loss': 0.49384785,

'Loss/RPNLoss/objectness\_loss': 0.058843136,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.2623408,

'learning\_rate': 0.04524}

INFO:tensorflow:Step 1500 per-step time 5.697s

I0820 05:07:51.182468 140458478384960 model\_lib\_v2.py:705] Step 1500 per-step time 5.697s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.168636,

'Loss/BoxClassifierLoss/localization\_loss': 0.41405368,

'Loss/RPNLoss/localization\_loss': 0.48196834,

'Loss/RPNLoss/objectness\_loss': 0.042368174,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.1070262,

'learning\_rate': 0.0484}

I0820 05:07:51.182758 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.168636,

'Loss/BoxClassifierLoss/localization\_loss': 0.41405368,

'Loss/RPNLoss/localization\_loss': 0.48196834,

'Loss/RPNLoss/objectness\_loss': 0.042368174,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.1070262,

'learning\_rate': 0.0484}

INFO:tensorflow:Step 1600 per-step time 5.691s

I0820 05:17:20.288712 140458478384960 model\_lib\_v2.py:705] Step 1600 per-step time 5.691s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.22634453,

'Loss/BoxClassifierLoss/localization\_loss': 0.5184082,

'Loss/RPNLoss/localization\_loss': 0.5145136,

'Loss/RPNLoss/objectness\_loss': 0.06753098,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.3267974,

'learning\_rate': 0.05156}

I0820 05:17:20.288997 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.22634453,

'Loss/BoxClassifierLoss/localization\_loss': 0.5184082,

'Loss/RPNLoss/localization\_loss': 0.5145136,

'Loss/RPNLoss/objectness\_loss': 0.06753098,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.3267974,

'learning\_rate': 0.05156}

INFO:tensorflow:Step 1700 per-step time 5.694s

I0820 05:26:49.719836 140458478384960 model\_lib\_v2.py:705] Step 1700 per-step time 5.694s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.16865721,

'Loss/BoxClassifierLoss/localization\_loss': 0.39930624,

'Loss/RPNLoss/localization\_loss': 0.33751732,

'Loss/RPNLoss/objectness\_loss': 0.06263571,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.9681165,

'learning\_rate': 0.05472}

I0820 05:26:49.720115 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.16865721,

'Loss/BoxClassifierLoss/localization\_loss': 0.39930624,

'Loss/RPNLoss/localization\_loss': 0.33751732,

'Loss/RPNLoss/objectness\_loss': 0.06263571,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 0.9681165,

'learning\_rate': 0.05472}

INFO:tensorflow:Step 1800 per-step time 5.696s

I0820 05:36:19.309818 140458478384960 model\_lib\_v2.py:705] Step 1800 per-step time 5.696s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.27124655,

'Loss/BoxClassifierLoss/localization\_loss': 0.4689083,

'Loss/RPNLoss/localization\_loss': 0.5537393,

'Loss/RPNLoss/objectness\_loss': 0.1429233,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.4368174,

'learning\_rate': 0.05788}

I0820 05:36:19.310094 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.27124655,

'Loss/BoxClassifierLoss/localization\_loss': 0.4689083,

'Loss/RPNLoss/localization\_loss': 0.5537393,

'Loss/RPNLoss/objectness\_loss': 0.1429233,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.4368174,

'learning\_rate': 0.05788}

INFO:tensorflow:Step 1900 per-step time 5.696s

I0820 05:45:48.887904 140458478384960 model\_lib\_v2.py:705] Step 1900 per-step time 5.696s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.1850632,

'Loss/BoxClassifierLoss/localization\_loss': 0.5829311,

'Loss/RPNLoss/localization\_loss': 0.2715367,

'Loss/RPNLoss/objectness\_loss': 0.030383585,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0699146,

'learning\_rate': 0.06104}

I0820 05:45:48.888165 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.1850632,

'Loss/BoxClassifierLoss/localization\_loss': 0.5829311,

'Loss/RPNLoss/localization\_loss': 0.2715367,

'Loss/RPNLoss/objectness\_loss': 0.030383585,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.0699146,

'learning\_rate': 0.06104}

INFO:tensorflow:Step 2000 per-step time 5.699s

I0820 05:55:18.775811 140458478384960 model\_lib\_v2.py:705] Step 2000 per-step time 5.699s

INFO:tensorflow:{'Loss/BoxClassifierLoss/classification\_loss': 0.20921928,

'Loss/BoxClassifierLoss/localization\_loss': 0.3952723,

'Loss/RPNLoss/localization\_loss': 0.41425455,

'Loss/RPNLoss/objectness\_loss': 0.06878592,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.087532,

'learning\_rate': 0.06420001}

I0820 05:55:18.776075 140458478384960 model\_lib\_v2.py:708] {'Loss/BoxClassifierLoss/classification\_loss': 0.20921928,

'Loss/BoxClassifierLoss/localization\_loss': 0.3952723,

'Loss/RPNLoss/localization\_loss': 0.41425455,

'Loss/RPNLoss/objectness\_loss': 0.06878592,

'Loss/regularization\_loss': 0.0,

'Loss/total\_loss': 1.087532,

'learning\_rate': 0.06420001}

==EVALUATING THE MODEL==

WARNING:tensorflow:Forced number of epochs for all eval validations to be 1.

W0820 05:55:25.330171 140183622838080 model\_lib\_v2.py:1089] Forced number of epochs for all eval validations to be 1.

INFO:tensorflow:Maybe overwriting sample\_1\_of\_n\_eval\_examples: None

I0820 05:55:25.330308 140183622838080 config\_util.py:552] Maybe overwriting sample\_1\_of\_n\_eval\_examples: None

INFO:tensorflow:Maybe overwriting use\_bfloat16: False

I0820 05:55:25.330360 140183622838080 config\_util.py:552] Maybe overwriting use\_bfloat16: False

INFO:tensorflow:Maybe overwriting eval\_num\_epochs: 1

I0820 05:55:25.330412 140183622838080 config\_util.py:552] Maybe overwriting eval\_num\_epochs: 1

WARNING:tensorflow:Expected number of evaluation epochs is 1, but instead encountered `eval\_on\_train\_input\_config.num\_epochs` = 0. Overwriting `num\_epochs` to 1.

W0820 05:55:25.330487 140183622838080 model\_lib\_v2.py:1106] Expected number of evaluation epochs is 1, but instead encountered `eval\_on\_train\_input\_config.num\_epochs` = 0. Overwriting `num\_epochs` to 1.

INFO:tensorflow:Reading unweighted datasets: ['/opt/ml/input/data/val/\*.tfrecord']

I0820 05:55:25.384810 140183622838080 dataset\_builder.py:162] Reading unweighted datasets: ['/opt/ml/input/data/val/\*.tfrecord']

INFO:tensorflow:Reading record datasets for input file: ['/opt/ml/input/data/val/\*.tfrecord']

I0820 05:55:25.385700 140183622838080 dataset\_builder.py:79] Reading record datasets for input file: ['/opt/ml/input/data/val/\*.tfrecord']

INFO:tensorflow:Number of filenames to read: 13

I0820 05:55:25.385781 140183622838080 dataset\_builder.py:80] Number of filenames to read: 13

WARNING:tensorflow:num\_readers has been reduced to 13 to match input file shards.

W0820 05:55:25.385830 140183622838080 dataset\_builder.py:86] num\_readers has been reduced to 13 to match input file shards.

WARNING:tensorflow:`shuffle` is false, but the input data stream is still slightly shuffled since `num\_readers` > 1.

W0820 05:55:25.388282 140183622838080 dataset\_builder.py:93] `shuffle` is false, but the input data stream is still slightly shuffled since `num\_readers` > 1.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:100: parallel\_interleave (from tensorflow.python.data.experimental.ops.interleave\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.interleave(map\_func, cycle\_length, block\_length, num\_parallel\_calls=tf.data.AUTOTUNE)` instead. If sloppy execution is desired, use `tf.data.Options.deterministic`.

W0820 05:55:25.390263 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:100: parallel\_interleave (from tensorflow.python.data.experimental.ops.interleave\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.interleave(map\_func, cycle\_length, block\_length, num\_parallel\_calls=tf.data.AUTOTUNE)` instead. If sloppy execution is desired, use `tf.data.Options.deterministic`.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:235: DatasetV1.map\_with\_legacy\_function (from tensorflow.python.data.ops.dataset\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.map()

W0820 05:55:25.404267 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/object\_detection/builders/dataset\_builder.py:235: DatasetV1.map\_with\_legacy\_function (from tensorflow.python.data.ops.dataset\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.data.Dataset.map()

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: sparse\_to\_dense (from tensorflow.python.ops.sparse\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Create a `tf.sparse.SparseTensor` and use `tf.sparse.to\_dense` instead.

W0820 05:55:28.756373 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: sparse\_to\_dense (from tensorflow.python.ops.sparse\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Create a `tf.sparse.SparseTensor` and use `tf.sparse.to\_dense` instead.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_float (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

W0820 05:55:29.873840 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_float (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

INFO:tensorflow:Waiting for new checkpoint at /opt/training

I0820 05:55:31.942551 140183622838080 checkpoint\_utils.py:168] Waiting for new checkpoint at /opt/training

INFO:tensorflow:Found new checkpoint at /opt/training/ckpt-3

I0820 05:55:31.943037 140183622838080 checkpoint\_utils.py:177] Found new checkpoint at /opt/training/ckpt-3

/usr/local/lib/python3.8/dist-packages/keras/src/backend.py:452: UserWarning: `tf.keras.backend.set\_learning\_phase` is deprecated and will be removed after 2020-10-11. To update it, simply pass a True/False value to the `training` argument of the `\_\_call\_\_` method of your layer or model.

warnings.warn(

INFO:tensorflow:depth of additional conv before box predictor: 0

I0820 05:55:36.812602 140183622838080 convolutional\_keras\_box\_predictor.py:152] depth of additional conv before box predictor: 0

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

W0820 05:55:42.409377 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: softmax\_cross\_entropy\_with\_logits (from tensorflow.python.ops.nn\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Future major versions of TensorFlow will allow gradients to flow

into the labels input on backprop by default.

See `tf.nn.softmax\_cross\_entropy\_with\_logits\_v2`.

W0820 05:55:45.904438 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: softmax\_cross\_entropy\_with\_logits (from tensorflow.python.ops.nn\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Future major versions of TensorFlow will allow gradients to flow

into the labels input on backprop by default.

See `tf.nn.softmax\_cross\_entropy\_with\_logits\_v2`.

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_int64 (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

W0820 05:55:53.259310 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/util/dispatch.py:1176: to\_int64 (from tensorflow.python.ops.math\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use `tf.cast` instead.

INFO:tensorflow:Finished eval step 0

I0820 05:55:53.275150 140183622838080 model\_lib\_v2.py:966] Finished eval step 0

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: py\_func (from tensorflow.python.ops.script\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

tf.py\_func is deprecated in TF V2. Instead, there are two

options available in V2.

- tf.py\_function takes a python function which manipulates tf eager

tensors instead of numpy arrays. It's easy to convert a tf eager tensor to

an ndarray (just call tensor.numpy()) but having access to eager tensors

means `tf.py\_function`s can use accelerators such as GPUs as well as

being differentiable using a gradient tape.

- tf.numpy\_function maintains the semantics of the deprecated tf.py\_func

(it is not differentiable, and manipulates numpy arrays). It drops the

stateful argument making all functions stateful.

W0820 05:55:53.393769 140183622838080 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: py\_func (from tensorflow.python.ops.script\_ops) is deprecated and will be removed in a future version.

Instructions for updating:

tf.py\_func is deprecated in TF V2. Instead, there are two

options available in V2.

- tf.py\_function takes a python function which manipulates tf eager

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means `tf.py\_function`s can use accelerators such as GPUs as well as

being differentiable using a gradient tape.

- tf.numpy\_function maintains the semantics of the deprecated tf.py\_func

(it is not differentiable, and manipulates numpy arrays). It drops the

stateful argument making all functions stateful.

Traceback (most recent call last):

File "model\_main\_tf2.py", line 114, in <module>

tf.compat.v1.app.run()

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/platform/app.py", line 36, in run

\_run(main=main, argv=argv, flags\_parser=\_parse\_flags\_tolerate\_undef)

File "/usr/local/lib/python3.8/dist-packages/absl/app.py", line 308, in run

\_run\_main(main, args)

File "/usr/local/lib/python3.8/dist-packages/absl/app.py", line 254, in \_run\_main

sys.exit(main(argv))

File "model\_main\_tf2.py", line 81, in main

model\_lib\_v2.eval\_continuously(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/model\_lib\_v2.py", line 1158, in eval\_continuously

eager\_eval\_loop(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/model\_lib\_v2.py", line 970, in eager\_eval\_loop

sbys\_image\_list = vutils.draw\_side\_by\_side\_evaluation\_image(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 736, in draw\_side\_by\_side\_evaluation\_image

images\_with\_groundtruth = draw\_bounding\_boxes\_on\_image\_tensors(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 622, in draw\_bounding\_boxes\_on\_image\_tensors

images = tf.map\_fn(draw\_boxes, elems, dtype=tf.uint8, back\_prop=False)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/util/deprecation.py", line 576, in new\_func

return func(\*args, \*\*kwargs)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/ops/map\_fn.py", line 498, in map\_fn

\_, r\_a = while\_loop.while\_loop(

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/ops/while\_loop.py", line 499, in while\_loop

loop\_vars = body(\*loop\_vars)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/ops/while\_loop.py", line 490, in <lambda>

body = lambda i, lv: (i + 1, orig\_body(\*lv))

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/ops/map\_fn.py", line 488, in compute

result\_value = autographed\_fn(elems\_value)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py", line 693, in wrapper

raise e.ag\_error\_metadata.to\_exception(e)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py", line 690, in wrapper

return converted\_call(f, args, kwargs, options=options)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py", line 439, in converted\_call

result = converted\_f(\*effective\_args, \*\*kwargs)

File "/tmp/\_\_autograph\_generated\_filezdsytim7.py", line 47, in tf\_\_draw\_boxes

image\_with\_boxes = ag\_\_.converted\_call(ag\_\_.ld(tf).py\_func, (ag\_\_.ld(visualize\_boxes\_fn), ag\_\_.ld(image\_and\_detections)[2:], ag\_\_.ld(tf).uint8), None, fscope)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py", line 331, in converted\_call

return \_call\_unconverted(f, args, kwargs, options, False)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py", line 460, in \_call\_unconverted

return f(\*args)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/util/deprecation.py", line 371, in new\_func

return func(\*args, \*\*kwargs)

File "/usr/local/lib/python3.8/dist-packages/tensorflow/python/util/traceback\_utils.py", line 153, in error\_handler

raise e.with\_traceback(filtered\_tb) from None

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 398, in visualization\_py\_func\_fn

return visualize\_boxes\_and\_labels\_on\_image\_array(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 1251, in visualize\_boxes\_and\_labels\_on\_image\_array

draw\_bounding\_box\_on\_image\_array(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 160, in draw\_bounding\_box\_on\_image\_array

draw\_bounding\_box\_on\_image(image\_pil, ymin, xmin, ymax, xmax, color,

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 219, in draw\_bounding\_box\_on\_image

display\_str\_heights = [font.getbbox(ds)[3] for ds in display\_str\_list]

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 219, in <listcomp>

display\_str\_heights = [font.getbbox(ds)[3] for ds in display\_str\_list]

AttributeError: in user code:

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 618, in draw\_boxes \*

image\_with\_boxes = tf.py\_func(visualize\_boxes\_fn, image\_and\_detections[2:],

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 398, in visualization\_py\_func\_fn

return visualize\_boxes\_and\_labels\_on\_image\_array(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 1251, in visualize\_boxes\_and\_labels\_on\_image\_array

draw\_bounding\_box\_on\_image\_array(

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 160, in draw\_bounding\_box\_on\_image\_array

draw\_bounding\_box\_on\_image(image\_pil, ymin, xmin, ymax, xmax, color,

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 219, in draw\_bounding\_box\_on\_image

display\_str\_heights = [font.getbbox(ds)[3] for ds in display\_str\_list]

File "/usr/local/lib/python3.8/dist-packages/object\_detection/utils/visualization\_utils.py", line 219, in <listcomp>

display\_str\_heights = [font.getbbox(ds)[3] for ds in display\_str\_list]

AttributeError: 'ImageFont' object has no attribute 'getbbox'

==EXPORTING THE MODEL==

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:459: calling map\_fn\_v2 (from tensorflow.python.ops.map\_fn) with back\_prop=False is deprecated and will be removed in a future version.

Instructions for updating:

back\_prop=False is deprecated. Consider using tf.stop\_gradient instead.

Instead of:

results = tf.map\_fn(fn, elems, back\_prop=False)

Use:

results = tf.nest.map\_structure(tf.stop\_gradient, tf.map\_fn(fn, elems))

W0820 05:55:56.886405 139688022734656 deprecation.py:641] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:459: calling map\_fn\_v2 (from tensorflow.python.ops.map\_fn) with back\_prop=False is deprecated and will be removed in a future version.

Instructions for updating:

back\_prop=False is deprecated. Consider using tf.stop\_gradient instead.

Instead of:

results = tf.map\_fn(fn, elems, back\_prop=False)

Use:

results = tf.nest.map\_structure(tf.stop\_gradient, tf.map\_fn(fn, elems))

INFO:tensorflow:depth of additional conv before box predictor: 0

I0820 05:56:00.682927 139688022734656 convolutional\_keras\_box\_predictor.py:152] depth of additional conv before box predictor: 0

WARNING:tensorflow:From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

W0820 05:56:06.463510 139688022734656 deprecation.py:364] From /usr/local/lib/python3.8/dist-packages/tensorflow/python/autograph/impl/api.py:460: Tensor.experimental\_ref (from tensorflow.python.framework.ops) is deprecated and will be removed in a future version.

Instructions for updating:

Use ref() instead.

I0820 05:56:11.226894 139688022734656 signature\_serialization.py:148] Function `call\_func` contains input name(s) resource with unsupported characters which will be renamed to mask\_rcnn\_keras\_box\_predictor\_mask\_rcnn\_class\_head\_classpredictor\_dense\_biasadd\_readvariableop\_resource in the SavedModel.

WARNING:tensorflow:Skipping full serialization of Keras layer <object\_detection.meta\_architectures.faster\_rcnn\_meta\_arch.FasterRCNNMetaArch object at 0x7f0b289bee20>, because it is not built.

W0820 05:56:14.035677 139688022734656 save\_impl.py:66] Skipping full serialization of Keras layer <object\_detection.meta\_architectures.faster\_rcnn\_meta\_arch.FasterRCNNMetaArch object at 0x7f0b289bee20>, because it is not built.

I0820 05:56:23.132017 139688022734656 save.py:274] Found untraced functions such as FirstStageBoxPredictor\_layer\_call\_fn, FirstStageBoxPredictor\_layer\_call\_and\_return\_conditional\_losses, mask\_rcnn\_keras\_box\_predictor\_layer\_call\_fn, mask\_rcnn\_keras\_box\_predictor\_layer\_call\_and\_return\_conditional\_losses, \_jit\_compiled\_convolution\_op while saving (showing 5 of 84). These functions will not be directly callable after loading.

INFO:tensorflow:Assets written to: /tmp/exported/saved\_model/assets

I0820 05:56:26.745170 139688022734656 builder\_impl.py:804] Assets written to: /tmp/exported/saved\_model/assets

I0820 05:56:26.953444 139688022734656 fingerprinting\_utils.py:48] Writing fingerprint to /tmp/exported/saved\_model/fingerprint.pb

INFO:tensorflow:Writing pipeline config file to /tmp/exported/pipeline.config

I0820 05:56:27.277829 139688022734656 config\_util.py:253] Writing pipeline config file to /tmp/exported/pipeline.config

2023-08-20 05:56:28,205 sagemaker-training-toolkit INFO Reporting training SUCCESS

2023-08-20 05:56:47 Uploading - Uploading generated training model

2023-08-20 05:56:47 Completed - Training job completed

Training seconds: 11721

Billable seconds: 11721