```
graves@pescadero ~/g/v/s/b/e/cifar10> burst python3 trainCNN_CIFAR10.py --nepochs 40
burst: Session: burst-graves
burst: Starting server
burst: server state:pending
burst: server state:pending
burst: server state:pending
burst: server state:running
burst: Waiting for public IP address to be assigned
burst: Public IP's:[]
burst: Public IP's:['54.190.176.219']
burst: Waiting for sshd
burst: sshd not responding; 10 attempts left
burst: Connecting through ssh
burst: Starting monitor process for shutdown++
burst: Removing topmost layer
burst: burst: name burst-graves size g4dn.xlarge image Deep Learning AMI (Ubuntu 18.04) Version 36.0 url
burst: Synchronizing project folders
rsync: mkstemp "/home/ubuntu/_BURST_gburst_venv_src_burst_examples_cifar10/output/.confusion_matrix.png.afT9Yv" failed: Permission denied (13)
rsync: mkstemp "/home/ubuntu/_BURST_gburst_venv_src_burst_examples_cifar10/output/.model_log.txt.w3B1rU" failed: Permission denied (13)
rsync: mkstemp "/home/ubuntu/_BURST_gburst_venv_src_burst_examples_cifar10/output/.model_losses.png.eBd8Ui" failed: Permission denied (13)
rsync: mkstemp "/home/ubuntu/_BURST_gburst_venv_src_burst_examples_cifar10/output/.training_example_images.png.GwqGsH" failed: Permission denied (13)
rsync: mkstemp "/home/ubuntu/_BURST_gburst_venv_src_burst_examples_cifar10/output/.wrong_examples.png.etMe05" failed: Permission denied (13)
rsync error: some files could not be transferred (code 23) at /AppleInternal/BuildRoot/Library/Caches/com.apple.xbs/Sources/rsync/rsync-55/rsync/main.c(996) [sender=2.6.9]
burst: Building docker container
burst: Running docker container
burst:
----------------------OUTPUT-----------------------
Loading CIFAR dataset...
Files already downloaded and verified
Files already downloaded and verified
GPU is available?: True
Using device: cuda:0
Training NN through 40 epochs.  Start time: 2021-02-18 23:42:55.319599
 Iteration   0, avg train_loss = 1.322, avg test_loss = 1.085,1 epoch duration: 0:00:14.692214
 Iteration   1, avg train_loss = 0.962, avg test_loss = 0.828,1 epoch duration: 0:00:13.578531
 Iteration   2, avg train_loss = 0.815, avg test_loss = 0.730,1 epoch duration: 0:00:13.301335
 Iteration   3, avg train_loss = 0.732, avg test_loss = 0.677,1 epoch duration: 0:00:13.297348
 Iteration   4, avg train_loss = 0.671, avg test_loss = 0.646,1 epoch duration: 0:00:13.757426
 Iteration   5, avg train_loss = 0.630, avg test_loss = 0.624,1 epoch duration: 0:00:13.326413
 Iteration   6, avg train_loss = 0.592, avg test_loss = 0.600,1 epoch duration: 0:00:13.299732
 Iteration   7, avg train_loss = 0.566, avg test_loss = 0.564,1 epoch duration: 0:00:13.331507
 Iteration   8, avg train_loss = 0.540, avg test_loss = 0.568,1 epoch duration: 0:00:13.424308
 Iteration   9, avg train_loss = 0.511, avg test_loss = 0.562,1 epoch duration: 0:00:13.358681
 Iteration  10, avg train_loss = 0.497, avg test_loss = 0.532,1 epoch duration: 0:00:13.392549
 Iteration  11, avg train_loss = 0.481, avg test_loss = 0.524,1 epoch duration: 0:00:13.257813
 Iteration  12, avg train_loss = 0.460, avg test_loss = 0.529,1 epoch duration: 0:00:13.343042
 Iteration  13, avg train_loss = 0.454, avg test_loss = 0.528,1 epoch duration: 0:00:13.453961
 Iteration  14, avg train_loss = 0.435, avg test_loss = 0.518,1 epoch duration: 0:00:13.333284
 Iteration  15, avg train_loss = 0.421, avg test_loss = 0.496,1 epoch duration: 0:00:13.377542
 Iteration  16, avg train_loss = 0.410, avg test_loss = 0.503,1 epoch duration: 0:00:13.389606
 Iteration  17, avg train_loss = 0.397, avg test_loss = 0.493,1 epoch duration: 0:00:13.437987
 Iteration  18, avg train_loss = 0.388, avg test_loss = 0.501,1 epoch duration: 0:00:13.302985
 Iteration  19, avg train_loss = 0.378, avg test_loss = 0.511,1 epoch duration: 0:00:13.330578
 Iteration  20, avg train_loss = 0.362, avg test_loss = 0.492,1 epoch duration: 0:00:13.361828
 Iteration  21, avg train_loss = 0.358, avg test_loss = 0.485,1 epoch duration: 0:00:13.441493
 Iteration  22, avg train_loss = 0.355, avg test_loss = 0.503,1 epoch duration: 0:00:13.350089
 Iteration  23, avg train_loss = 0.339, avg test_loss = 0.516,1 epoch duration: 0:00:13.314143
 Iteration  24, avg train_loss = 0.335, avg test_loss = 0.483,1 epoch duration: 0:00:13.404132
 Iteration  25, avg train_loss = 0.331, avg test_loss = 0.481,1 epoch duration: 0:00:13.255574
 Iteration  26, avg train_loss = 0.322, avg test_loss = 0.482,1 epoch duration: 0:00:13.235949
 Iteration  27, avg train_loss = 0.315, avg test_loss = 0.463,1 epoch duration: 0:00:13.258742
 Iteration  28, avg train_loss = 0.308, avg test_loss = 0.486,1 epoch duration: 0:00:13.346027
 Iteration  29, avg train_loss = 0.299, avg test_loss = 0.482,1 epoch duration: 0:00:13.407676
 Iteration  30, avg train_loss = 0.296, avg test_loss = 0.464,1 epoch duration: 0:00:13.295024
 Iteration  31, avg train_loss = 0.284, avg test_loss = 0.479,1 epoch duration: 0:00:13.262353
 Iteration  32, avg train_loss = 0.285, avg test_loss = 0.473,1 epoch duration: 0:00:13.318225
 Iteration  33, avg train_loss = 0.274, avg test_loss = 0.494,1 epoch duration: 0:00:13.381038
 Iteration  34, avg train_loss = 0.274, avg test_loss = 0.490,1 epoch duration: 0:00:13.457008
 Iteration  35, avg train_loss = 0.270, avg test_loss = 0.485,1 epoch duration: 0:00:13.413512
 Iteration  36, avg train_loss = 0.263, avg test_loss = 0.501,1 epoch duration: 0:00:13.411721
 Iteration  37, avg train_loss = 0.266, avg test_loss = 0.485,1 epoch duration: 0:00:13.283547
 Iteration  38, avg train_loss = 0.254, avg test_loss = 0.470,1 epoch duration: 0:00:13.476122
 Iteration  39, avg train_loss = 0.249, avg test_loss = 0.470,1 epoch duration: 0:00:13.343224
 Done training.
---------------------------------------
Training set accuracy: 0.9195
    Test set accuracy: 0.8635
------------- Test Set: ---------------
# Correct predictions: 8635
  # Wrong predictions: 1365
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----------------------------------------------------------------
        Layer (type)               Output Shape         Param #
================================================================
            Conv2d-1           [-1, 32, 32, 32]             896
              ReLU-2           [-1, 32, 32, 32]               0
       BatchNorm2d-3           [-1, 32, 32, 32]              64
            Conv2d-4           [-1, 32, 32, 32]           9,248
              ReLU-5           [-1, 32, 32, 32]               0
       BatchNorm2d-6           [-1, 32, 32, 32]              64
         MaxPool2d-7           [-1, 32, 16, 16]               0
            Conv2d-8           [-1, 64, 16, 16]          18,496
              ReLU-9           [-1, 64, 16, 16]               0
      BatchNorm2d-10           [-1, 64, 16, 16]             128
           Conv2d-11           [-1, 64, 16, 16]          36,928
             ReLU-12           [-1, 64, 16, 16]               0
      BatchNorm2d-13           [-1, 64, 16, 16]             128
        MaxPool2d-14             [-1, 64, 8, 8]               0
           Conv2d-15            [-1, 128, 8, 8]          73,856
             ReLU-16            [-1, 128, 8, 8]               0
      BatchNorm2d-17            [-1, 128, 8, 8]             256
           Conv2d-18            [-1, 128, 8, 8]         147,584
             ReLU-19            [-1, 128, 8, 8]               0
      BatchNorm2d-20            [-1, 128, 8, 8]             256
        MaxPool2d-21            [-1, 128, 4, 4]               0
           Linear-22                 [-1, 1024]       2,098,176
           Linear-23                   [-1, 10]          10,250
================================================================
Total params: 2,396,330
Trainable params: 2,396,330
Non-trainable params: 0
----------------------------------------------------------------
Input size (MB): 0.01
Forward/backward pass size (MB): 2.74
Params size (MB): 9.14
Estimated Total Size (MB): 11.90
----------------------------------------------------------------

stdout flushed
stderr flushed
----------------------END-------------------------
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