

In [1]:

```
import os
import random
import shutil
import time
import warnings

import torch
import torch.nn as nn
import torch.backends.cudnn as cudnn
import torch.optim

import torch.utils.data
import torchvision
import torchvision.transforms as transforms
import torchvision.datasets as datasets
import torchvision.models as models
```

In [2]:

```
from torch.cuda.amp import GradScaler
from torch.cuda.amp import autocast
```

In [3]:

```
from torch.utils.tensorboard import SummaryWriter
writer = SummaryWriter()
```

In [4]:

```
!pip install wandb
```

Collecting wandb

Downloading wandb-0.12.6-py2.py3-none-any.whl (1.7 MB)

|██| 1.7 MB 6.6 MB/s eta 0:00:01

Requirement already satisfied: Click!=8.0.0,>=7.0 in /opt/conda/lib/python3.8/site-packages (from wandb) (7.1.2)

Collecting shortuuid>=0.5.0

Downloading shortuuid-1.0.1-py3-none-any.whl (7.5 kB)

Collecting yaspin>=1.0.0

Downloading yaspin-2.1.0-py3-none-any.whl (18 kB)

Collecting sentry-sdk>=1.0.0

Downloading sentry\_sdk-1.4.3-py2.py3-none-any.whl (139 kB)

|██| 139 kB 108.3 MB/s eta 0:00:01

Requirement already satisfied: protobuf>=3.12.0 in /opt/conda/lib/python3.8/site-packages (from wandb) (3.17.3)

Requirement already satisfied: PyYAML in /opt/conda/lib/python3.8/site-packages (from wandb) (5.4.1)

Collecting pathtools

Downloading pathtools-0.1.2.tar.gz (11 kB)

Collecting GitPython>=1.0.0

Downloading GitPython-3.1.24-py3-none-any.whl (180 kB)

|██| 180 kB 93.0 MB/s eta 0:00:01

Requirement already satisfied: python-dateutil>=2.6.1 in /opt/conda/lib/python3.8/site-packages (from wandb) (2.8.2)

```
Requirement already satisfied: psutil>=5.0.0 in /opt/conda/lib/python3.8/site-packages (from wandb) (5.8.0)
Requirement already satisfied: six>=1.13.0 in /opt/conda/lib/python3.8/site-packages (from wandb) (1.16.0)
Collecting promise<3,>=2.0
  Downloading promise-2.3.tar.gz (19 kB)
Collecting docker-pycreds>=0.4.0
  Downloading docker_pycreds-0.4.0-py2.py3-none-any.whl (9.0 kB)
Collecting configparser>=3.8.1
  Downloading configparser-5.0.2-py3-none-any.whl (19 kB)
Requirement already satisfied: requests<3,>=2.0.0 in /opt/conda/lib/python3.8/site-packages (from wandb) (2.26.0)
Collecting subprocess32>=3.5.3
  Downloading subprocess32-3.5.4.tar.gz (97 kB)
    |████████████████████████████████████████| 97 kB 13.8 MB/s eta 0:00:01
Collecting gitdb<5,>=4.0.1
  Downloading gitdb-4.0.9-py3-none-any.whl (63 kB)
    |████████████████████████████████████████| 63 kB 3.6 MB/s eta 0:00:01
Requirement already satisfied: typing-extensions>=3.7.4.3 in /opt/conda/lib/python3.8/site-packages (from GitPython>=1.0.0->wandb) (3.10.0.0)
Collecting smmap<6,>=3.0.1
  Downloading smmap-5.0.0-py3-none-any.whl (24 kB)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in /opt/conda/lib/python3.8/site-packages (from requests<3,>=2.0.0->wandb) (1.26.6)
Requirement already satisfied: charset-normalizer~=2.0.0 in /opt/conda/lib/python3.8/site-packages (from requests<3,>=2.0.0->wandb) (2.0.0)
Requirement already satisfied: certifi>=2017.4.17 in /opt/conda/lib/python3.8/site-packages (from requests<3,>=2.0.0->wandb) (2021.5.30)
Requirement already satisfied: idna<4,>=2.5 in /opt/conda/lib/python3.8/site-packages (from requests<3,>=2.0.0->wandb) (3.1)
Collecting termcolor<2.0.0,>=1.1.0
  Downloading termcolor-1.1.0.tar.gz (3.9 kB)
Building wheels for collected packages: promise, subprocess32, termcolor, pathtools
  Building wheel for promise (setup.py) ... done
  Created wheel for promise: filename=promise-2.3-py3-none-any.whl size=21502 sha256=d1e96ee754b60142006ae6154cbb03c44a6c9cadbf09017204c9db40d9f9013b
  Stored in directory: /root/.cache/pip/wheels/54/aa/01/724885182f93150035a2a91bce34a12877e8067a97baaf5dc8
  Building wheel for subprocess32 (setup.py) ... done
  Created wheel for subprocess32: filename=subprocess32-3.5.4-py3-none-any.whl size=6502 sha256=fb42cb5354f07eef2b8aa31ce727cf7a2d8013842b8bb92b6efal6bc5de809f5
  Stored in directory: /root/.cache/pip/wheels/9f/69/d1/50b39b308a87998eaf5c1d9095e5a5bd2ad98501e2b7936d36
  Building wheel for termcolor (setup.py) ... done
  Created wheel for termcolor: filename=termcolor-1.1.0-py3-none-any.whl size=4847 sha256=bfc0d7aa5b74c50e177c51113c43646030d2c1f18012183222795f686fb11f87
  Stored in directory: /root/.cache/pip/wheels/a0/16/9c/5473df82468f958445479c59e784896fa24f4a5fc024b0f501
  Building wheel for pathtools (setup.py) ... done
  Created wheel for pathtools: filename=pathtools-0.1.2-py3-none-any.whl size=8807 sha256=94b1cb52dd55d0928a9b7577304cf0afa3eb8642e6308e382f3f3f5efab6e669
  Stored in directory: /root/.cache/pip/wheels/4c/8e/7e/72fbc243e1aeecae64a96875432e70d4e92f3d2d18123be004
Successfully built promise subprocess32 termcolor pathtools
Installing collected packages: smmap, termcolor, gitdb, yaspin, subprocess32, shortuuid, sentry-sdk, promise, pathtools, GitPython, docker-pycreds, configparser, wandb
Successfully installed GitPython-3.1.24 configparser-5.0.2 docker-pycreds-0.4.0 gitdb-4.0.9 pathtools-0.1.2 promise-2.3 sentry-sdk-1.4.3 shortuuid-1.0.1 smmap-5.0.0 subprocess32-3.5.4 termcolor-1.1.0 wandb-0.12.6 yaspin-2.1.0
```

WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: <https://pip.pypa.io/warnings/venv>

```
In [6]: import wandb
        wandb.login()
```

**wandb:** You can find your API key in your browser here: <https://wandb.ai/authorize>  
wandb: Paste an API key from your profile and hit enter: .....

**wandb:** Appending key for api.wandb.ai to your netrc file: /root/.netrc

```
Out[6]: True
```

```
In [7]: wandb.init(project="w251-hw9", entity="rochelleli")
```

**wandb:** Currently logged in as: **rochelleli** (use `wandb login --relogin` to force relogin)

Syncing run **costumed-specter-1** to [Weights & Biases \(docs\)](#).

```
Out[7]:  Display W&B run
```

```
In [8]: SEED=1

        random.seed(SEED)
        torch.manual_seed(SEED)
        cudnn.deterministic = True
```

```
In [9]: torch.cuda.device_count()
```

```
Out[9]: 1
```

```
In [10]: START_EPOCH = 0
```

```
In [14]: ARCH = 'resnet18'
        EPOCHS = 2
        LR = 0.1
        MOMENTUM = 0.9
        WEIGHT_DECAY = 1e-4
        PRINT_FREQ = 10
        TRAIN_BATCH=500
        VAL_BATCH=500
        WORKERS=2
        TRAINDIR="/home/ubuntu/data/train"
        VALDIR="/home/ubuntu/data/val"
```

```
In [15]: if not torch.cuda.is_available():
        print('GPU not detected.. did you pass through your GPU?')
```

```
In [16]: wandb.init(config={"epochs": EPOCHS, "batch_size": TRAIN_BATCH, "momentum": MOMENTUM, "WEIGHT_DECAY": WEIGHT_DECAY, "arc1
```

Finishing last run (ID:1pgsa3v1) before initializing another...

Waiting for W&B process to finish, PID 449... **(success).**

Synced 5 W&B file(s), 0 media file(s), 0 artifact file(s) and 0 other file(s)

Synced **costumed-specter-1**: <https://wandb.ai/rochelleli/w251-hw9/runs/1pgsa3v1>

Find logs at: ./wandb/run-20211031\_065745-1pgsa3v1/logs

Successfully finished last run (ID:1pgsa3v1). Initializing new run:

Syncing run **eerie-poltergeist-4** to [Weights & Biases \(docs\)](#).

```
Out[16]: Display W&B run
```

```
In [24]: GPU = 0
```

```
In [25]: torch.cuda.set_device(GPU)
```

```
In [26]: global_step = 1
```

```
In [17]: def train(train_loader, model, criterion, optimizer, epoch):
        global global_step
        batch_time = AverageMeter('Time', ':6.3f')
        data_time = AverageMeter('Data', ':6.3f')
        losses = AverageMeter('Loss', ':.4e')
        top1 = AverageMeter('Acc@1', ':6.2f')
        top5 = AverageMeter('Acc@5', ':6.2f')
        progress = ProgressMeter(
            len(train_loader),
            [batch_time, data_time, losses, top1, top5],
            prefix="Epoch: [{}]" .format(epoch))

        # Grad Scaler
        scaler = GradScaler()
        # switch to train mode
        model.train()

        end = time.time()
```

```

for i, (images, target) in enumerate(train_loader):
    # measure data loading time
    data_time.update(time.time() - end)
    optimizer.zero_grad()

    if GPU is not None:
        images = images.cuda(GPU, non_blocking=True)
    if torch.cuda.is_available():
        target = target.cuda(GPU, non_blocking=True)

    # compute output
    with autocast():
        output = model(images)
        loss = criterion(output, target)

    # measure accuracy and record loss
    acc1, acc5 = accuracy(output, target, topk=(1, 5))
    losses.update(loss.item(), images.size(0))
    top1.update(acc1[0], images.size(0))
    top5.update(acc5[0], images.size(0))

    # compute gradient and do SGD step
    # optimizer.zero_grad()
    # loss.backward()
    # optimizer.step()

    # use the scaler
    scaler.scale(loss).backward()
    scaler.step(optimizer)
    scaler.update()

    # measure elapsed time
    batch_time.update(time.time() - end)
    end = time.time()

    writer.add_scalar("Loss/train", loss, global_step = global_step)
    writer.add_scalar("acc1/train", top1.avg, global_step = global_step)
    writer.add_scalar("acc5/train", top5.avg, global_step = global_step)

    wandb.log({"Loss/train": loss, 'acc1/train': top1.avg, 'acc5/train': top5.avg})

    global_step = global_step + 1

    if i % PRINT_FREQ == 0:
        progress.display(i)

```

In [18]:

```

def validate(val_loader, model, criterion):
    global global_step
    batch_time = AverageMeter('Time', ':6.3f')

```

```

losses = AverageMeter('Loss', ':.4e')
top1 = AverageMeter('Acc@1', ':6.2f')
top5 = AverageMeter('Acc@5', ':6.2f')
progress = ProgressMeter(
    len(val_loader),
    [batch_time, losses, top1, top5],
    prefix='Test: ')

# switch to evaluate mode
model.eval()

with torch.no_grad():
    end = time.time()
    for i, (images, target) in enumerate(val_loader):
        if GPU is not None:
            images = images.cuda(GPU, non_blocking=True)
            if torch.cuda.is_available():
                target = target.cuda(GPU, non_blocking=True)

        # compute output
        output = model(images)
        loss = criterion(output, target)

        # measure accuracy and record loss
        acc1, acc5 = accuracy(output, target, topk=(1, 5))
        losses.update(loss.item(), images.size(0))
        top1.update(acc1[0], images.size(0))
        top5.update(acc5[0], images.size(0))

        # measure elapsed time
        batch_time.update(time.time() - end)
        end = time.time()

        if i % PRINT_FREQ == 0:
            progress.display(i)

    # TODO: this should also be done with the ProgressMeter
    print(' * Acc@1 {top1.avg:.3f} Acc@5 {top5.avg:.3f}'
          .format(top1=top1, top5=top5))
    writer.add_scalar("Loss/val", losses.avg, global_step = global_step)
    writer.add_scalar("acc1/val", top1.avg, global_step = global_step)
    writer.add_scalar("acc5/val", top5.avg, global_step = global_step)

    wandb.log({"Loss/val": losses.avg, 'acc1/val': top1.avg, 'acc5/val': top5.avg})

    global_step = global_step + 1

    return top1.avg

```

```
def save_checkpoint(state, is_best, filename='checkpoint.pth.tar'):
    torch.save(state, filename)
    if is_best:
        shutil.copyfile(filename, 'model_best.pth.tar')
```

In [20]:

```
class AverageMeter(object):
    """Computes and stores the average and current value"""
    def __init__(self, name, fmt=':f'):
        self.name = name
        self.fmt = fmt
        self.reset()

    def reset(self):
        self.val = 0
        self.avg = 0
        self.sum = 0
        self.count = 0

    def update(self, val, n=1):
        self.val = val
        self.sum += val * n
        self.count += n
        self.avg = self.sum / self.count

    def __str__(self):
        fmtstr = '{name} {val}' + self.fmt + ' ({avg}' + self.fmt + '})'
        return fmtstr.format(**self.__dict__)
```

In [21]:

```
class ProgressMeter(object):
    def __init__(self, num_batches, meters, prefix=""):
        self.batch_fmtstr = self._get_batch_fmtstr(num_batches)
        self.meters = meters
        self.prefix = prefix

    def display(self, batch):
        entries = [self.prefix + self.batch_fmtstr.format(batch)]
        entries += [str(meter) for meter in self.meters]
        print('\t'.join(entries))

    def _get_batch_fmtstr(self, num_batches):
        num_digits = len(str(num_batches // 1))
        fmt = '{:' + str(num_digits) + 'd}'
        return '[' + fmt + '/' + fmt.format(num_batches) + '']
```

In [22]:

```
def adjust_learning_rate(optimizer, epoch):
    """Sets the learning rate to the initial LR decayed by 10 every 30 epochs"""
```

```
lr = LR * (0.1 ** (epoch // 30))
for param_group in optimizer.param_groups:
    param_group['lr'] = lr
```

```
In [23]: def accuracy(output, target, topk=(1,)):
        """Computes the accuracy over the k top predictions for the specified values of k"""
        with torch.no_grad():
            maxk = max(topk)
            batch_size = target.size(0)

            _, pred = output.topk(maxk, 1, True, True)
            pred = pred.t()
            correct = pred.eq(target.view(1, -1).expand_as(pred))

            res = []
            for k in topk:
                correct_k = correct[:k].reshape(-1).float().sum(0, keepdim=True)
                res.append(correct_k.mul_(100.0 / batch_size))
            return res
```

```
In [27]: cudnn.benchmark = True
```

```
In [28]: imagenet_mean_RGB = [0.47889522, 0.47227842, 0.43047404]
        imagenet_std_RGB = [0.229, 0.224, 0.225]
```

```
In [29]: normalize = transforms.Normalize(mean=imagenet_mean_RGB, std=imagenet_std_RGB)
```

```
In [30]: IMG_SIZE = 224
        NUM_CLASSES = 1000
```

```
In [31]: model = models.__dict__[ARCH]()
```

```
In [32]: inf = model.fc.in_features
```

```
In [33]: model.fc = nn.Linear(inf, NUM_CLASSES)
```

```
In [34]: model.cuda(GPU)
```



```
Out[34]: ResNet(
  (conv1): Conv2d(3, 64, kernel_size=(7, 7), stride=(2, 2), padding=(3, 3), bias=False)
  (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
  (relu): ReLU(inplace=True)
  (maxpool): MaxPool2d(kernel_size=3, stride=2, padding=1, dilation=1, ceil_mode=False)
  (layer1): Sequential(
    (0): BasicBlock(
      (conv1): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    )
    (1): BasicBlock(
      (conv1): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(64, 64, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    )
  )
  (layer2): Sequential(
    (0): BasicBlock(
      (conv1): Conv2d(64, 128, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (downsample): Sequential(
        (0): Conv2d(64, 128, kernel_size=(1, 1), stride=(2, 2), bias=False)
        (1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      )
    )
    (1): BasicBlock(
      (conv1): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(128, 128, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    )
  )
  (layer3): Sequential(
    (0): BasicBlock(
      (conv1): Conv2d(128, 256, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (downsample): Sequential(
        (0): Conv2d(128, 256, kernel_size=(1, 1), stride=(2, 2), bias=False)
        (1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      )
    )
  )
)
```

```

    )
    (1): BasicBlock(
      (conv1): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn1): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (relu): ReLU(inplace=True)
      (conv2): Conv2d(256, 256, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
      (bn2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    )
  )
(layer4): Sequential(
  (0): BasicBlock(
    (conv1): Conv2d(256, 512, kernel_size=(3, 3), stride=(2, 2), padding=(1, 1), bias=False)
    (bn1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    (relu): ReLU(inplace=True)
    (conv2): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
    (bn2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    (downsample): Sequential(
      (0): Conv2d(256, 512, kernel_size=(1, 1), stride=(2, 2), bias=False)
      (1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    )
  )
  (1): BasicBlock(
    (conv1): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
    (bn1): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
    (relu): ReLU(inplace=True)
    (conv2): Conv2d(512, 512, kernel_size=(3, 3), stride=(1, 1), padding=(1, 1), bias=False)
    (bn2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
  )
)
(avgpool): AdaptiveAvgPool2d(output_size=(1, 1))
(fc): Linear(in_features=512, out_features=1000, bias=True)
)

```

```
In [35]: criterion = nn.CrossEntropyLoss().cuda(GPU)
```

```
In [36]: optimizer = torch.optim.SGD(model.parameters(), LR,
                                     momentum=MOMENTUM,
                                     weight_decay=WEIGHT_DECAY)
```

```
In [37]: scheduler = torch.optim.lr_scheduler.CosineAnnealingLR(optimizer, T_max=EPOCHS)
```

```
In [38]: transform_train = transforms.Compose([
    transforms.Resize((256,256)),
    transforms.RandomCrop(IMG_SIZE, padding=4),
    transforms.RandomHorizontalFlip(),

```

```
transforms.ToTensor(),
transforms.Normalize(imagenet_mean_RGB, imagenet_std_RGB),
])
```

```
In [40]: train_dataset = datasets.ImageFolder(
        TRAINDIR, transform=transform_train)
```

```
In [41]: transform_val = transforms.Compose([
        transforms.Resize((256,256)),
        transforms.RandomCrop(IMG_SIZE, padding=4),
        transforms.ToTensor(),
        transforms.Normalize(imagenet_mean_RGB, imagenet_std_RGB),
        ])
```

```
In [42]: val_dataset = datasets.ImageFolder(
        VALDIR, transform=transform_val)
```

```
In [43]: train_loader = torch.utils.data.DataLoader(
        train_dataset, batch_size=TRAIN_BATCH, shuffle=True,
        num_workers=WORKERS, pin_memory=True, sampler=None)
```

```
In [44]: val_loader = torch.utils.data.DataLoader(
        val_dataset, batch_size=VAL_BATCH, shuffle=False,
        num_workers=WORKERS, pin_memory=True, sampler=None)
```

```
In [45]: best_acc1 = 0
```

```
In [46]: for epoch in range(START_EPOCH, 2):
        #     adjust_learning_rate(optimizer, epoch)

        # train for one epoch
        train(train_loader, model, criterion, optimizer, epoch)

        # evaluate on validation set
        acc1 = validate(val_loader, model, criterion)

        # remember best acc@1 and save checkpoint
        is_best = acc1 > best_acc1
        best_acc1 = max(acc1, best_acc1)
```

```

save_checkpoint({
    'epoch': epoch + 1,
    'arch': ARCH,
    'state_dict': model.state_dict(),
    'best_acc1': best_acc1,
    'optimizer' : optimizer.state_dict(),
}, is_best)

scheduler.step()
print('lr: ' + str(scheduler.get_last_lr()[0]))

writer.add_scalar("lr", scheduler.get_last_lr()[0], global_step = global_step)

wandb.log({'lr': scheduler.get_last_lr()[0]})

```

Epoch: [0][ 0/2563]	Time 15.712 (15.712)	Data 4.016 ( 4.016)	Loss 7.0163e+00 (7.0163e+00)	Acc@1 0.20 ( 0.20)	Acc@5 0.60 ( 0.60)
Epoch: [0][ 10/2563]	Time 0.738 ( 2.468)	Data 0.095 ( 0.803)	Loss 7.0141e+00 (6.9886e+00)	Acc@1 0.40 ( 0.09)	Acc@5 1.40 ( 0.69)
Epoch: [0][ 20/2563]	Time 0.816 ( 2.069)	Data 0.170 ( 0.884)	Loss 7.0331e+00 (7.0013e+00)	Acc@1 0.20 ( 0.18)	Acc@5 0.60 ( 0.78)
Epoch: [0][ 30/2563]	Time 1.625 ( 1.966)	Data 0.979 ( 0.955)	Loss 6.8999e+00 (6.9824e+00)	Acc@1 0.00 ( 0.24)	Acc@5 1.60 ( 0.97)
Epoch: [0][ 40/2563]	Time 1.480 ( 1.876)	Data 0.830 ( 0.953)	Loss 6.8295e+00 (6.9551e+00)	Acc@1 0.20 ( 0.28)	Acc@5 1.40 ( 1.13)
Epoch: [0][ 50/2563]	Time 1.775 ( 1.849)	Data 1.128 ( 0.979)	Loss 6.7658e+00 (6.9228e+00)	Acc@1 0.00 ( 0.31)	Acc@5 1.20 ( 1.29)
Epoch: [0][ 60/2563]	Time 1.806 ( 1.806)	Data 1.156 ( 0.972)	Loss 6.6769e+00 (6.8872e+00)	Acc@1 0.40 ( 0.38)	Acc@5 3.40 ( 1.56)
Epoch: [0][ 70/2563]	Time 1.765 ( 1.783)	Data 1.114 ( 0.975)	Loss 6.6679e+00 (6.8563e+00)	Acc@1 0.20 ( 0.39)	Acc@5 2.80 ( 1.68)
Epoch: [0][ 80/2563]	Time 1.839 ( 1.762)	Data 1.185 ( 0.973)	Loss 6.5323e+00 (6.8242e+00)	Acc@1 1.40 ( 0.41)	Acc@5 3.40 ( 1.83)
Epoch: [0][ 90/2563]	Time 1.879 ( 1.751)	Data 1.224 ( 0.977)	Loss 6.5566e+00 (6.7969e+00)	Acc@1 1.00 ( 0.44)	Acc@5 2.80 ( 1.96)
Epoch: [0][ 100/2563]	Time 2.071 ( 1.739)	Data 1.412 ( 0.977)	Loss 6.5304e+00 (6.7686e+00)	Acc@1 0.20 ( 0.46)	Acc@5 2.40 ( 2.08)
Epoch: [0][ 110/2563]	Time 2.194 ( 1.738)	Data 1.534 ( 0.984)	Loss 6.4966e+00 (6.7412e+00)	Acc@1 1.00 ( 0.52)	Acc@5 3.40 ( 2.28)
Epoch: [0][ 120/2563]	Time 2.661 ( 1.729)	Data 1.963 ( 0.982)	Loss 6.4257e+00 (6.7136e+00)	Acc@1 1.00 ( 0.56)	Acc@5 4.20 ( 2.43)
Epoch: [0][ 130/2563]	Time 2.458 ( 1.722)	Data 1.785 ( 0.981)	Loss 6.3550e+00 (6.6890e+00)	Acc@1 1.60 ( 0.62)	Acc@5 4.40 ( 2.59)
Epoch: [0][ 140/2563]	Time 2.268 ( 1.711)	Data 1.604 ( 0.976)	Loss 6.2774e+00 (6.6635e+00)	Acc@1 0.80 ( 0.68)	Acc@5 5.40 ( 2.77)
Epoch: [0][ 150/2563]	Time 2.183 ( 1.706)	Data 1.524 ( 0.975)	Loss 6.3094e+00 (6.6417e+00)	Acc@1 0.40 ( 0.72)	Acc@5 2.60 ( 2.91)
Epoch: [0][ 160/2563]	Time 2.186 ( 1.704)	Data 1.524 ( 0.977)	Loss 6.3103e+00 (6.6182e+00)	Acc@1 1.60 ( 0.76)	Acc@5 5.00 ( 3.06)
Epoch: [0][ 170/2563]	Time 2.116 ( 1.697)	Data 1.452 ( 0.973)	Loss 6.1483e+00 (6.5953e+00)	Acc@1 2.40 ( 0.00)	Acc@5 0.00 ( 0.00)

0.81)	Acc@5	4.80 ( 3.20)								
Epoch:	[0][ 180/2563]	Time	2.564 ( 1.692)	Data	1.871 ( 0.972)	Loss	6.0714e+00 (6.5710e+00)	Acc@1	2.60 (	
0.86)	Acc@5	6.00 ( 3.35)								
Epoch:	[0][ 190/2563]	Time	2.348 ( 1.693)	Data	1.681 ( 0.976)	Loss	6.0891e+00 (6.5489e+00)	Acc@1	2.00 (	
0.93)	Acc@5	8.80 ( 3.52)								
Epoch:	[0][ 200/2563]	Time	1.685 ( 1.688)	Data	1.020 ( 0.973)	Loss	6.0037e+00 (6.5260e+00)	Acc@1	2.00 (	
1.00)	Acc@5	6.60 ( 3.69)								
Epoch:	[0][ 210/2563]	Time	2.203 ( 1.691)	Data	1.538 ( 0.979)	Loss	6.0623e+00 (6.5038e+00)	Acc@1	1.80 (	
1.06)	Acc@5	5.60 ( 3.87)								
Epoch:	[0][ 220/2563]	Time	2.557 ( 1.689)	Data	1.844 ( 0.978)	Loss	6.1123e+00 (6.4836e+00)	Acc@1	2.80 (	
1.12)	Acc@5	7.60 ( 4.03)								
Epoch:	[0][ 230/2563]	Time	3.219 ( 1.689)	Data	2.511 ( 0.980)	Loss	6.0717e+00 (6.4632e+00)	Acc@1	2.00 (	
1.19)	Acc@5	8.00 ( 4.22)								
Epoch:	[0][ 240/2563]	Time	1.383 ( 1.685)	Data	0.716 ( 0.978)	Loss	6.0003e+00 (6.4416e+00)	Acc@1	3.40 (	
1.26)	Acc@5	7.20 ( 4.40)								
Epoch:	[0][ 250/2563]	Time	1.647 ( 1.686)	Data	0.983 ( 0.980)	Loss	5.8504e+00 (6.4208e+00)	Acc@1	1.80 (	
1.32)	Acc@5	9.40 ( 4.56)								
Epoch:	[0][ 260/2563]	Time	1.466 ( 1.684)	Data	0.803 ( 0.980)	Loss	6.0090e+00 (6.4020e+00)	Acc@1	2.40 (	
1.37)	Acc@5	8.80 ( 4.71)								
Epoch:	[0][ 270/2563]	Time	1.392 ( 1.682)	Data	0.726 ( 0.980)	Loss	5.8805e+00 (6.3829e+00)	Acc@1	3.00 (	
1.41)	Acc@5	9.40 ( 4.86)								
Epoch:	[0][ 280/2563]	Time	1.867 ( 1.679)	Data	1.199 ( 0.978)	Loss	5.7891e+00 (6.3651e+00)	Acc@1	3.20 (	
1.46)	Acc@5	10.20 ( 5.02)								
Epoch:	[0][ 290/2563]	Time	1.588 ( 1.677)	Data	0.922 ( 0.977)	Loss	5.7527e+00 (6.3461e+00)	Acc@1	2.40 (	
1.50)	Acc@5	8.40 ( 5.18)								
Epoch:	[0][ 300/2563]	Time	1.797 ( 1.679)	Data	1.131 ( 0.980)	Loss	5.7673e+00 (6.3285e+00)	Acc@1	2.40 (	
1.53)	Acc@5	10.20 ( 5.33)								
Epoch:	[0][ 310/2563]	Time	1.783 ( 1.676)	Data	1.119 ( 0.978)	Loss	5.7675e+00 (6.3109e+00)	Acc@1	3.40 (	
1.58)	Acc@5	9.80 ( 5.49)								
Epoch:	[0][ 320/2563]	Time	1.655 ( 1.676)	Data	0.987 ( 0.979)	Loss	5.7228e+00 (6.2932e+00)	Acc@1	3.00 (	
1.64)	Acc@5	12.40 ( 5.67)								
Epoch:	[0][ 330/2563]	Time	1.986 ( 1.674)	Data	1.318 ( 0.978)	Loss	5.6598e+00 (6.2752e+00)	Acc@1	2.80 (	
1.69)	Acc@5	10.80 ( 5.84)								
Epoch:	[0][ 340/2563]	Time	2.105 ( 1.675)	Data	1.440 ( 0.979)	Loss	5.6638e+00 (6.2581e+00)	Acc@1	3.00 (	
1.75)	Acc@5	10.80 ( 6.02)								
Epoch:	[0][ 350/2563]	Time	2.329 ( 1.672)	Data	1.661 ( 0.977)	Loss	5.6772e+00 (6.2418e+00)	Acc@1	4.80 (	
1.81)	Acc@5	12.80 ( 6.18)								
Epoch:	[0][ 360/2563]	Time	2.129 ( 1.672)	Data	1.465 ( 0.978)	Loss	5.6808e+00 (6.2250e+00)	Acc@1	3.20 (	
1.87)	Acc@5	12.60 ( 6.37)								
Epoch:	[0][ 370/2563]	Time	2.424 ( 1.671)	Data	1.758 ( 0.977)	Loss	5.7126e+00 (6.2088e+00)	Acc@1	2.60 (	
1.92)	Acc@5	11.20 ( 6.55)								
Epoch:	[0][ 380/2563]	Time	2.427 ( 1.669)	Data	1.758 ( 0.976)	Loss	5.6815e+00 (6.1928e+00)	Acc@1	6.00 (	
1.99)	Acc@5	14.00 ( 6.73)								
Epoch:	[0][ 390/2563]	Time	1.993 ( 1.669)	Data	1.326 ( 0.977)	Loss	5.6478e+00 (6.1777e+00)	Acc@1	3.40 (	
2.03)	Acc@5	10.60 ( 6.88)								
Epoch:	[0][ 400/2563]	Time	3.335 ( 1.671)	Data	2.601 ( 0.979)	Loss	5.4771e+00 (6.1620e+00)	Acc@1	4.80 (	
2.09)	Acc@5	14.40 ( 7.05)								
Epoch:	[0][ 410/2563]	Time	2.513 ( 1.669)	Data	1.800 ( 0.978)	Loss	5.4550e+00 (6.1467e+00)	Acc@1	5.00 (	
2.13)	Acc@5	14.40 ( 7.21)								
Epoch:	[0][ 420/2563]	Time	2.316 ( 1.666)	Data	1.651 ( 0.975)	Loss	5.5511e+00 (6.1310e+00)	Acc@1	5.00 (	
2.20)	Acc@5	14.00 ( 7.39)								

Epoch: [0][ 430/2563]	Time 1.814 ( 1.666)	Data 1.150 ( 0.976)	Loss 5.3799e+00 (6.1151e+00)	Acc@1 5.20 (
2.27) Acc@5 16.00 ( 7.58)				
Epoch: [0][ 440/2563]	Time 2.239 ( 1.665)	Data 1.574 ( 0.975)	Loss 5.4187e+00 (6.1005e+00)	Acc@1 5.80 (
2.34) Acc@5 16.20 ( 7.76)				
Epoch: [0][ 450/2563]	Time 1.887 ( 1.666)	Data 1.222 ( 0.976)	Loss 5.4137e+00 (6.0851e+00)	Acc@1 5.20 (
2.40) Acc@5 17.00 ( 7.95)				
Epoch: [0][ 460/2563]	Time 1.968 ( 1.665)	Data 1.301 ( 0.976)	Loss 5.4173e+00 (6.0706e+00)	Acc@1 6.20 (
2.46) Acc@5 17.00 ( 8.12)				
Epoch: [0][ 470/2563]	Time 1.966 ( 1.665)	Data 1.301 ( 0.976)	Loss 5.2361e+00 (6.0565e+00)	Acc@1 5.80 (
2.52) Acc@5 19.60 ( 8.29)				
Epoch: [0][ 480/2563]	Time 1.613 ( 1.665)	Data 0.948 ( 0.977)	Loss 5.2176e+00 (6.0416e+00)	Acc@1 6.00 (
2.59) Acc@5 18.80 ( 8.46)				
Epoch: [0][ 490/2563]	Time 1.245 ( 1.662)	Data 0.578 ( 0.975)	Loss 5.3641e+00 (6.0272e+00)	Acc@1 5.60 (
2.67) Acc@5 16.80 ( 8.65)				
Epoch: [0][ 500/2563]	Time 1.739 ( 1.664)	Data 1.073 ( 0.976)	Loss 5.3415e+00 (6.0128e+00)	Acc@1 7.20 (
2.73) Acc@5 19.40 ( 8.83)				
Epoch: [0][ 510/2563]	Time 1.557 ( 1.663)	Data 0.890 ( 0.976)	Loss 5.3418e+00 (5.9981e+00)	Acc@1 5.80 (
2.80) Acc@5 16.80 ( 9.02)				
Epoch: [0][ 520/2563]	Time 1.449 ( 1.663)	Data 0.784 ( 0.977)	Loss 5.1992e+00 (5.9850e+00)	Acc@1 4.80 (
2.85) Acc@5 18.60 ( 9.17)				
Epoch: [0][ 530/2563]	Time 1.272 ( 1.661)	Data 0.601 ( 0.975)	Loss 5.1796e+00 (5.9712e+00)	Acc@1 7.20 (
2.92) Acc@5 21.20 ( 9.36)				
Epoch: [0][ 540/2563]	Time 2.010 ( 1.662)	Data 1.343 ( 0.976)	Loss 5.2578e+00 (5.9585e+00)	Acc@1 6.40 (
2.98) Acc@5 19.60 ( 9.52)				
Epoch: [0][ 550/2563]	Time 1.639 ( 1.661)	Data 0.972 ( 0.975)	Loss 5.2618e+00 (5.9460e+00)	Acc@1 5.60 (
3.03) Acc@5 20.40 ( 9.68)				
Epoch: [0][ 560/2563]	Time 1.831 ( 1.660)	Data 1.164 ( 0.975)	Loss 5.2582e+00 (5.9337e+00)	Acc@1 6.80 (
3.09) Acc@5 20.60 ( 9.85)				
Epoch: [0][ 570/2563]	Time 2.113 ( 1.661)	Data 1.447 ( 0.977)	Loss 5.1976e+00 (5.9206e+00)	Acc@1 7.40 (
3.16) Acc@5 20.20 ( 10.02)				
Epoch: [0][ 580/2563]	Time 2.378 ( 1.661)	Data 1.714 ( 0.976)	Loss 5.2602e+00 (5.9078e+00)	Acc@1 6.80 (
3.21) Acc@5 19.20 ( 10.18)				
Epoch: [0][ 590/2563]	Time 2.471 ( 1.661)	Data 1.806 ( 0.977)	Loss 5.1259e+00 (5.8952e+00)	Acc@1 8.20 (
3.27) Acc@5 22.00 ( 10.35)				
Epoch: [0][ 600/2563]	Time 2.455 ( 1.660)	Data 1.740 ( 0.976)	Loss 5.1782e+00 (5.8829e+00)	Acc@1 8.40 (
3.33) Acc@5 21.40 ( 10.51)				
Epoch: [0][ 610/2563]	Time 2.418 ( 1.659)	Data 1.751 ( 0.975)	Loss 5.2022e+00 (5.8709e+00)	Acc@1 6.80 (
3.39) Acc@5 17.60 ( 10.66)				
Epoch: [0][ 620/2563]	Time 2.212 ( 1.662)	Data 1.548 ( 0.978)	Loss 5.2333e+00 (5.8593e+00)	Acc@1 7.20 (
3.45) Acc@5 18.20 ( 10.81)				
Epoch: [0][ 630/2563]	Time 1.932 ( 1.661)	Data 1.269 ( 0.978)	Loss 5.2023e+00 (5.8479e+00)	Acc@1 7.80 (
3.52) Acc@5 19.40 ( 10.96)				
Epoch: [0][ 640/2563]	Time 1.783 ( 1.662)	Data 1.118 ( 0.979)	Loss 5.1473e+00 (5.8362e+00)	Acc@1 7.20 (
3.57) Acc@5 23.40 ( 11.12)				
Epoch: [0][ 650/2563]	Time 1.231 ( 1.660)	Data 0.565 ( 0.977)	Loss 5.0663e+00 (5.8247e+00)	Acc@1 8.20 (
3.63) Acc@5 20.20 ( 11.27)				
Epoch: [0][ 660/2563]	Time 1.692 ( 1.661)	Data 1.029 ( 0.978)	Loss 5.0788e+00 (5.8140e+00)	Acc@1 7.60 (
3.69) Acc@5 22.00 ( 11.42)				
Epoch: [0][ 670/2563]	Time 0.756 ( 1.660)	Data 0.093 ( 0.978)	Loss 5.0994e+00 (5.8024e+00)	Acc@1 8.80 (
3.75) Acc@5 20.60 ( 11.57)				
Epoch: [0][ 680/2563]	Time 0.822 ( 1.659)	Data 0.154 ( 0.977)	Loss 5.0015e+00 (5.7910e+00)	Acc@1 7.00 (

3.82)	Acc@5	24.20 ( 11.73)										
Epoch: [0][ 690/2563]	Time	1.249 ( 1.660)	Data	0.584 ( 0.978)	Loss	5.0175e+00 (5.7797e+00)	Acc@1	7.60 ( 3.88)	Acc@5	23.40 ( 11.90)		
Epoch: [0][ 700/2563]	Time	1.291 ( 1.660)	Data	0.621 ( 0.977)	Loss	5.0960e+00 (5.7690e+00)	Acc@1	8.20 ( 3.95)	Acc@5	21.00 ( 12.04)		
Epoch: [0][ 710/2563]	Time	1.171 ( 1.661)	Data	0.504 ( 0.979)	Loss	5.0522e+00 (5.7580e+00)	Acc@1	8.00 ( 4.02)	Acc@5	20.40 ( 12.19)		
Epoch: [0][ 720/2563]	Time	1.562 ( 1.660)	Data	0.895 ( 0.978)	Loss	4.9474e+00 (5.7473e+00)	Acc@1	8.80 ( 4.08)	Acc@5	25.00 ( 12.34)		
Epoch: [0][ 730/2563]	Time	1.977 ( 1.660)	Data	1.311 ( 0.979)	Loss	5.0513e+00 (5.7367e+00)	Acc@1	8.00 ( 4.14)	Acc@5	23.00 ( 12.50)		
Epoch: [0][ 740/2563]	Time	1.792 ( 1.660)	Data	1.125 ( 0.979)	Loss	5.0149e+00 (5.7262e+00)	Acc@1	11.40 ( 4.20)	Acc@5	24.80 ( 12.65)		
Epoch: [0][ 750/2563]	Time	2.008 ( 1.660)	Data	1.339 ( 0.979)	Loss	4.8676e+00 (5.7149e+00)	Acc@1	11.20 ( 4.28)	Acc@5	26.20 ( 12.81)		
Epoch: [0][ 760/2563]	Time	1.775 ( 1.661)	Data	1.107 ( 0.979)	Loss	5.0174e+00 (5.7046e+00)	Acc@1	10.40 ( 4.34)	Acc@5	25.00 ( 12.96)		
Epoch: [0][ 770/2563]	Time	1.937 ( 1.660)	Data	1.269 ( 0.979)	Loss	4.9143e+00 (5.6939e+00)	Acc@1	11.40 ( 4.41)	Acc@5	26.20 ( 13.11)		
Epoch: [0][ 780/2563]	Time	2.441 ( 1.660)	Data	1.774 ( 0.980)	Loss	5.0148e+00 (5.6837e+00)	Acc@1	8.20 ( 4.48)	Acc@5	23.80 ( 13.26)		
Epoch: [0][ 790/2563]	Time	2.338 ( 1.659)	Data	1.676 ( 0.979)	Loss	4.8827e+00 (5.6731e+00)	Acc@1	9.60 ( 4.55)	Acc@5	27.20 ( 13.42)		
Epoch: [0][ 800/2563]	Time	2.297 ( 1.659)	Data	1.629 ( 0.979)	Loss	4.7108e+00 (5.6631e+00)	Acc@1	11.20 ( 4.60)	Acc@5	26.80 ( 13.56)		
Epoch: [0][ 810/2563]	Time	2.125 ( 1.659)	Data	1.461 ( 0.979)	Loss	4.9814e+00 (5.6532e+00)	Acc@1	8.60 ( 4.67)	Acc@5	23.00 ( 13.71)		
Epoch: [0][ 820/2563]	Time	1.775 ( 1.658)	Data	1.108 ( 0.978)	Loss	4.9274e+00 (5.6437e+00)	Acc@1	9.60 ( 4.74)	Acc@5	25.40 ( 13.85)		
Epoch: [0][ 830/2563]	Time	2.344 ( 1.659)	Data	1.691 ( 0.979)	Loss	4.7979e+00 (5.6335e+00)	Acc@1	9.20 ( 4.81)	Acc@5	26.20 ( 14.00)		
Epoch: [0][ 840/2563]	Time	1.750 ( 1.658)	Data	1.106 ( 0.978)	Loss	4.8107e+00 (5.6235e+00)	Acc@1	7.60 ( 4.87)	Acc@5	24.20 ( 14.14)		
Epoch: [0][ 850/2563]	Time	1.489 ( 1.657)	Data	0.849 ( 0.978)	Loss	4.6643e+00 (5.6134e+00)	Acc@1	10.20 ( 4.94)	Acc@5	25.60 ( 14.29)		
Epoch: [0][ 860/2563]	Time	1.532 ( 1.658)	Data	0.896 ( 0.979)	Loss	4.6555e+00 (5.6038e+00)	Acc@1	12.60 ( 5.00)	Acc@5	28.60 ( 14.43)		
Epoch: [0][ 870/2563]	Time	2.392 ( 1.658)	Data	1.755 ( 0.979)	Loss	4.8971e+00 (5.5944e+00)	Acc@1	12.40 ( 5.06)	Acc@5	25.80 ( 14.57)		
Epoch: [0][ 880/2563]	Time	2.329 ( 1.658)	Data	1.693 ( 0.980)	Loss	4.7383e+00 (5.5846e+00)	Acc@1	11.80 ( 5.13)	Acc@5	28.20 ( 14.72)		
Epoch: [0][ 890/2563]	Time	1.769 ( 1.657)	Data	1.133 ( 0.979)	Loss	4.8191e+00 (5.5745e+00)	Acc@1	11.00 ( 5.21)	Acc@5	25.80 ( 14.87)		
Epoch: [0][ 900/2563]	Time	1.612 ( 1.656)	Data	0.975 ( 0.979)	Loss	4.5753e+00 (5.5646e+00)	Acc@1	13.40 ( 5.28)	Acc@5	31.40 ( 15.03)		
Epoch: [0][ 910/2563]	Time	1.927 ( 1.656)	Data	1.289 ( 0.980)	Loss	4.7023e+00 (5.5551e+00)	Acc@1	9.60 ( 5.34)	Acc@5	27.80 ( 15.17)		
Epoch: [0][ 920/2563]	Time	1.642 ( 1.656)	Data	1.009 ( 0.979)	Loss	4.5928e+00 (5.5459e+00)	Acc@1	14.60 ( 5.41)	Acc@5	31.60 ( 15.32)		
Epoch: [0][ 930/2563]	Time	1.250 ( 1.656)	Data	0.611 ( 0.981)	Loss	4.5639e+00 (5.5367e+00)	Acc@1	9.40 ( 5.47)	Acc@5	26.20 ( 15.46)		

Epoch: [0][ 940/2563]	Time 1.513 ( 1.655)	Data 0.876 ( 0.980)	Loss 4.6244e+00 (5.5273e+00)	Acc@1 12.80 (
5.55) Acc@5 32.60 ( 15.60)				
Epoch: [0][ 950/2563]	Time 1.662 ( 1.655)	Data 1.026 ( 0.980)	Loss 4.7114e+00 (5.5182e+00)	Acc@1 10.40 (
5.61) Acc@5 26.40 ( 15.74)				
Epoch: [0][ 960/2563]	Time 1.923 ( 1.655)	Data 1.287 ( 0.980)	Loss 4.5753e+00 (5.5092e+00)	Acc@1 13.20 (
5.68) Acc@5 30.20 ( 15.88)				
Epoch: [0][ 970/2563]	Time 1.653 ( 1.654)	Data 1.015 ( 0.980)	Loss 4.6537e+00 (5.5001e+00)	Acc@1 12.00 (
5.75) Acc@5 26.60 ( 16.02)				
Epoch: [0][ 980/2563]	Time 2.188 ( 1.655)	Data 1.549 ( 0.981)	Loss 4.6582e+00 (5.4912e+00)	Acc@1 11.80 (
5.81) Acc@5 31.20 ( 16.16)				
Epoch: [0][ 990/2563]	Time 2.274 ( 1.654)	Data 1.634 ( 0.981)	Loss 4.7361e+00 (5.4825e+00)	Acc@1 9.80 (
5.87) Acc@5 27.40 ( 16.29)				
Epoch: [0][1000/2563]	Time 2.385 ( 1.654)	Data 1.744 ( 0.980)	Loss 4.5814e+00 (5.4735e+00)	Acc@1 12.40 (
5.94) Acc@5 31.00 ( 16.44)				
Epoch: [0][1010/2563]	Time 2.141 ( 1.654)	Data 1.496 ( 0.980)	Loss 4.5763e+00 (5.4647e+00)	Acc@1 10.60 (
6.00) Acc@5 33.00 ( 16.58)				
Epoch: [0][1020/2563]	Time 1.865 ( 1.654)	Data 1.220 ( 0.981)	Loss 4.6481e+00 (5.4562e+00)	Acc@1 13.60 (
6.07) Acc@5 30.20 ( 16.72)				
Epoch: [0][1030/2563]	Time 1.941 ( 1.653)	Data 1.293 ( 0.981)	Loss 4.4861e+00 (5.4478e+00)	Acc@1 12.00 (
6.13) Acc@5 30.00 ( 16.84)				
Epoch: [0][1040/2563]	Time 1.542 ( 1.653)	Data 0.894 ( 0.981)	Loss 4.6175e+00 (5.4393e+00)	Acc@1 12.00 (
6.20) Acc@5 29.40 ( 16.97)				
Epoch: [0][1050/2563]	Time 1.435 ( 1.653)	Data 0.787 ( 0.980)	Loss 4.5546e+00 (5.4309e+00)	Acc@1 10.20 (
6.25) Acc@5 31.80 ( 17.11)				
Epoch: [0][1060/2563]	Time 1.149 ( 1.653)	Data 0.497 ( 0.981)	Loss 4.4541e+00 (5.4218e+00)	Acc@1 14.80 (
6.33) Acc@5 33.20 ( 17.25)				
Epoch: [0][1070/2563]	Time 0.996 ( 1.652)	Data 0.346 ( 0.980)	Loss 4.4926e+00 (5.4132e+00)	Acc@1 13.00 (
6.39) Acc@5 33.20 ( 17.39)				
Epoch: [0][1080/2563]	Time 0.753 ( 1.651)	Data 0.101 ( 0.980)	Loss 4.4187e+00 (5.4048e+00)	Acc@1 15.00 (
6.45) Acc@5 33.00 ( 17.52)				
Epoch: [0][1090/2563]	Time 0.930 ( 1.652)	Data 0.274 ( 0.980)	Loss 4.6871e+00 (5.3965e+00)	Acc@1 11.80 (
6.52) Acc@5 30.80 ( 17.66)				
Epoch: [0][1100/2563]	Time 0.755 ( 1.652)	Data 0.097 ( 0.980)	Loss 4.4457e+00 (5.3884e+00)	Acc@1 16.20 (
6.60) Acc@5 33.20 ( 17.80)				
Epoch: [0][1110/2563]	Time 1.073 ( 1.651)	Data 0.413 ( 0.980)	Loss 4.4673e+00 (5.3795e+00)	Acc@1 14.40 (
6.66) Acc@5 32.20 ( 17.94)				
Epoch: [0][1120/2563]	Time 0.795 ( 1.651)	Data 0.139 ( 0.979)	Loss 4.4549e+00 (5.3714e+00)	Acc@1 13.40 (
6.73) Acc@5 33.60 ( 18.08)				
Epoch: [0][1130/2563]	Time 1.198 ( 1.651)	Data 0.541 ( 0.980)	Loss 4.4523e+00 (5.3630e+00)	Acc@1 14.60 (
6.80) Acc@5 31.60 ( 18.21)				
Epoch: [0][1140/2563]	Time 1.132 ( 1.651)	Data 0.474 ( 0.979)	Loss 4.3032e+00 (5.3548e+00)	Acc@1 16.60 (
6.87) Acc@5 36.40 ( 18.34)				
Epoch: [0][1150/2563]	Time 1.734 ( 1.652)	Data 1.075 ( 0.980)	Loss 4.4417e+00 (5.3470e+00)	Acc@1 13.20 (
6.93) Acc@5 31.00 ( 18.47)				
Epoch: [0][1160/2563]	Time 1.512 ( 1.651)	Data 0.852 ( 0.980)	Loss 4.4288e+00 (5.3387e+00)	Acc@1 14.80 (
7.00) Acc@5 32.80 ( 18.61)				
Epoch: [0][1170/2563]	Time 1.301 ( 1.651)	Data 0.646 ( 0.980)	Loss 4.4443e+00 (5.3307e+00)	Acc@1 15.40 (
7.06) Acc@5 35.20 ( 18.75)				
Epoch: [0][1180/2563]	Time 1.753 ( 1.651)	Data 1.095 ( 0.980)	Loss 4.2035e+00 (5.3227e+00)	Acc@1 18.60 (
7.12) Acc@5 39.40 ( 18.88)				
Epoch: [0][1190/2563]	Time 1.179 ( 1.651)	Data 0.521 ( 0.980)	Loss 4.2165e+00 (5.3146e+00)	Acc@1 15.00 (



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Epoch: [0][1450/2563]	Time 1.423 ( 1.647)	Data 0.769 ( 0.981)	Loss 4.1672e+00 (5.1192e+00)	Acc@1 17.80 (
8.89) Acc@5 39.40 ( 22.31)				
Epoch: [0][1460/2563]	Time 0.751 ( 1.647)	Data 0.097 ( 0.981)	Loss 3.9982e+00 (5.1120e+00)	Acc@1 19.20 (
8.95) Acc@5 42.80 ( 22.44)				
Epoch: [0][1470/2563]	Time 0.755 ( 1.647)	Data 0.100 ( 0.981)	Loss 3.9263e+00 (5.1050e+00)	Acc@1 20.20 (
9.01) Acc@5 43.40 ( 22.56)				
Epoch: [0][1480/2563]	Time 0.657 ( 1.647)	Data 0.002 ( 0.981)	Loss 3.9839e+00 (5.0985e+00)	Acc@1 18.00 (
9.07) Acc@5 42.80 ( 22.67)				
Epoch: [0][1490/2563]	Time 0.656 ( 1.647)	Data 0.002 ( 0.981)	Loss 4.1926e+00 (5.0918e+00)	Acc@1 18.60 (
9.14) Acc@5 37.80 ( 22.79)				
Epoch: [0][1500/2563]	Time 0.662 ( 1.647)	Data 0.002 ( 0.981)	Loss 4.0177e+00 (5.0850e+00)	Acc@1 18.60 (
9.19) Acc@5 42.00 ( 22.91)				
Epoch: [0][1510/2563]	Time 0.660 ( 1.647)	Data 0.003 ( 0.981)	Loss 4.1322e+00 (5.0784e+00)	Acc@1 17.80 (
9.26) Acc@5 39.60 ( 23.03)				
Epoch: [0][1520/2563]	Time 0.660 ( 1.647)	Data 0.002 ( 0.980)	Loss 4.1766e+00 (5.0716e+00)	Acc@1 17.00 (
9.32) Acc@5 40.60 ( 23.15)				
Epoch: [0][1530/2563]	Time 0.660 ( 1.647)	Data 0.002 ( 0.980)	Loss 3.8637e+00 (5.0644e+00)	Acc@1 22.60 (
9.39) Acc@5 44.60 ( 23.27)				
Epoch: [0][1540/2563]	Time 0.667 ( 1.646)	Data 0.002 ( 0.980)	Loss 3.9573e+00 (5.0573e+00)	Acc@1 20.00 (
9.46) Acc@5 43.80 ( 23.39)				
Epoch: [0][1550/2563]	Time 1.192 ( 1.647)	Data 0.529 ( 0.980)	Loss 4.0068e+00 (5.0502e+00)	Acc@1 19.80 (
9.53) Acc@5 40.60 ( 23.52)				
Epoch: [0][1560/2563]	Time 1.388 ( 1.646)	Data 0.731 ( 0.980)	Loss 3.7967e+00 (5.0432e+00)	Acc@1 20.80 (
9.60) Acc@5 44.20 ( 23.64)				
Epoch: [0][1570/2563]	Time 1.477 ( 1.646)	Data 0.833 ( 0.980)	Loss 4.0522e+00 (5.0373e+00)	Acc@1 19.00 (
9.65) Acc@5 41.20 ( 23.74)				
Epoch: [0][1580/2563]	Time 1.643 ( 1.646)	Data 1.005 ( 0.980)	Loss 4.1465e+00 (5.0306e+00)	Acc@1 16.60 (
9.72) Acc@5 39.20 ( 23.86)				
Epoch: [0][1590/2563]	Time 1.401 ( 1.646)	Data 0.766 ( 0.980)	Loss 4.0296e+00 (5.0239e+00)	Acc@1 19.00 (
9.78) Acc@5 43.60 ( 23.98)				
Epoch: [0][1600/2563]	Time 1.796 ( 1.647)	Data 1.159 ( 0.981)	Loss 4.0175e+00 (5.0175e+00)	Acc@1 18.80 (
9.84) Acc@5 41.40 ( 24.09)				
Epoch: [0][1610/2563]	Time 1.332 ( 1.646)	Data 0.697 ( 0.981)	Loss 3.9992e+00 (5.0112e+00)	Acc@1 17.80 (
9.90) Acc@5 43.00 ( 24.20)				
Epoch: [0][1620/2563]	Time 1.613 ( 1.647)	Data 0.979 ( 0.981)	Loss 3.8597e+00 (5.0048e+00)	Acc@1 19.00 (
9.97) Acc@5 44.00 ( 24.31)				
Epoch: [0][1630/2563]	Time 1.992 ( 1.646)	Data 1.356 ( 0.981)	Loss 3.8636e+00 (4.9981e+00)	Acc@1 18.80 ( 1
0.03) Acc@5 46.40 ( 24.43)				
Epoch: [0][1640/2563]	Time 2.504 ( 1.646)	Data 1.825 ( 0.981)	Loss 3.9545e+00 (4.9921e+00)	Acc@1 22.80 ( 1
0.09) Acc@5 41.00 ( 24.54)				
Epoch: [0][1650/2563]	Time 2.553 ( 1.646)	Data 1.886 ( 0.981)	Loss 4.0675e+00 (4.9861e+00)	Acc@1 19.60 ( 1
0.15) Acc@5 41.20 ( 24.65)				
Epoch: [0][1660/2563]	Time 2.648 ( 1.646)	Data 1.962 ( 0.981)	Loss 4.0999e+00 (4.9795e+00)	Acc@1 18.20 ( 1
0.21) Acc@5 41.80 ( 24.76)				
Epoch: [0][1670/2563]	Time 2.342 ( 1.645)	Data 1.706 ( 0.981)	Loss 3.9395e+00 (4.9733e+00)	Acc@1 18.80 ( 1
0.28) Acc@5 43.00 ( 24.87)				
Epoch: [0][1680/2563]	Time 2.652 ( 1.646)	Data 1.968 ( 0.981)	Loss 3.7528e+00 (4.9669e+00)	Acc@1 24.00 ( 1
0.35) Acc@5 47.20 ( 24.99)				
Epoch: [0][1690/2563]	Time 2.612 ( 1.646)	Data 1.926 ( 0.981)	Loss 4.0542e+00 (4.9603e+00)	Acc@1 20.40 ( 1
0.41) Acc@5 41.00 ( 25.10)				
Epoch: [0][1700/2563]	Time 3.358 ( 1.646)	Data 2.639 ( 0.981)	Loss 3.8043e+00 (4.9538e+00)	Acc@1 21.80 ( 1

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Epoch: [0][1960/2563]	Time	2.478 ( 1.644)	Data	1.799 ( 0.978)	Loss	3.6846e+00 (4.7963e+00)	Acc@1	22.20 ( 1
2.09) Acc@5	46.60 ( 28.04)							
Epoch: [0][1970/2563]	Time	2.573 ( 1.644)	Data	1.868 ( 0.978)	Loss	3.8171e+00 (4.7909e+00)	Acc@1	23.40 ( 1
2.15) Acc@5	47.40 ( 28.13)							
Epoch: [0][1980/2563]	Time	2.859 ( 1.645)	Data	2.144 ( 0.979)	Loss	3.7431e+00 (4.7854e+00)	Acc@1	22.80 ( 1
2.20) Acc@5	47.60 ( 28.23)							
Epoch: [0][1990/2563]	Time	2.476 ( 1.644)	Data	1.796 ( 0.978)	Loss	3.6308e+00 (4.7796e+00)	Acc@1	21.60 ( 1
2.27) Acc@5	49.20 ( 28.34)							
Epoch: [0][2000/2563]	Time	2.721 ( 1.644)	Data	1.987 ( 0.978)	Loss	3.6888e+00 (4.7740e+00)	Acc@1	23.40 ( 1
2.33) Acc@5	47.60 ( 28.44)							
Epoch: [0][2010/2563]	Time	2.525 ( 1.645)	Data	1.824 ( 0.978)	Loss	3.7095e+00 (4.7682e+00)	Acc@1	21.80 ( 1
2.38) Acc@5	47.80 ( 28.54)							
Epoch: [0][2020/2563]	Time	2.456 ( 1.644)	Data	1.789 ( 0.978)	Loss	3.5944e+00 (4.7622e+00)	Acc@1	26.20 ( 1
2.45) Acc@5	50.20 ( 28.64)							
Epoch: [0][2030/2563]	Time	2.391 ( 1.645)	Data	1.728 ( 0.978)	Loss	3.6925e+00 (4.7568e+00)	Acc@1	22.40 ( 1
2.51) Acc@5	46.60 ( 28.74)							
Epoch: [0][2040/2563]	Time	2.726 ( 1.645)	Data	2.006 ( 0.978)	Loss	3.6648e+00 (4.7513e+00)	Acc@1	24.00 ( 1
2.57) Acc@5	46.00 ( 28.84)							
Epoch: [0][2050/2563]	Time	2.760 ( 1.644)	Data	2.055 ( 0.978)	Loss	3.5461e+00 (4.7458e+00)	Acc@1	25.60 ( 1
2.63) Acc@5	51.00 ( 28.94)							
Epoch: [0][2060/2563]	Time	2.679 ( 1.645)	Data	1.946 ( 0.978)	Loss	3.6648e+00 (4.7402e+00)	Acc@1	23.80 ( 1
2.68) Acc@5	49.60 ( 29.03)							
Epoch: [0][2070/2563]	Time	2.558 ( 1.645)	Data	1.843 ( 0.978)	Loss	3.3907e+00 (4.7346e+00)	Acc@1	26.20 ( 1
2.74) Acc@5	55.00 ( 29.14)							
Epoch: [0][2080/2563]	Time	2.465 ( 1.645)	Data	1.805 ( 0.978)	Loss	3.6459e+00 (4.7289e+00)	Acc@1	27.00 ( 1
2.81) Acc@5	48.20 ( 29.24)							
Epoch: [0][2090/2563]	Time	2.369 ( 1.645)	Data	1.704 ( 0.978)	Loss	3.4615e+00 (4.7232e+00)	Acc@1	29.80 ( 1
2.87) Acc@5	55.60 ( 29.34)							
Epoch: [0][2100/2563]	Time	2.630 ( 1.645)	Data	1.917 ( 0.978)	Loss	3.7516e+00 (4.7178e+00)	Acc@1	22.60 ( 1
2.93) Acc@5	45.20 ( 29.44)							
Epoch: [0][2110/2563]	Time	2.563 ( 1.645)	Data	1.860 ( 0.977)	Loss	3.3891e+00 (4.7123e+00)	Acc@1	29.00 ( 1
2.99) Acc@5	52.60 ( 29.54)							
Epoch: [0][2120/2563]	Time	2.640 ( 1.645)	Data	1.906 ( 0.977)	Loss	3.7213e+00 (4.7070e+00)	Acc@1	21.80 ( 1
3.05) Acc@5	48.20 ( 29.64)							
Epoch: [0][2130/2563]	Time	2.357 ( 1.644)	Data	1.695 ( 0.977)	Loss	3.6740e+00 (4.7016e+00)	Acc@1	23.80 ( 1
3.11) Acc@5	46.40 ( 29.73)							
Epoch: [0][2140/2563]	Time	2.737 ( 1.644)	Data	2.031 ( 0.977)	Loss	3.4626e+00 (4.6963e+00)	Acc@1	28.40 ( 1
3.17) Acc@5	52.20 ( 29.83)							
Epoch: [0][2150/2563]	Time	2.547 ( 1.644)	Data	1.834 ( 0.976)	Loss	3.4911e+00 (4.6913e+00)	Acc@1	27.60 ( 1
3.23) Acc@5	50.80 ( 29.92)							
Epoch: [0][2160/2563]	Time	2.630 ( 1.644)	Data	1.899 ( 0.976)	Loss	3.7201e+00 (4.6860e+00)	Acc@1	24.00 ( 1
3.29) Acc@5	48.00 ( 30.01)							
Epoch: [0][2170/2563]	Time	3.237 ( 1.644)	Data	2.526 ( 0.976)	Loss	3.4880e+00 (4.6808e+00)	Acc@1	28.60 ( 1
3.35) Acc@5	52.60 ( 30.11)							
Epoch: [0][2180/2563]	Time	2.645 ( 1.644)	Data	1.940 ( 0.976)	Loss	3.5610e+00 (4.6755e+00)	Acc@1	26.40 ( 1
3.41) Acc@5	50.00 ( 30.21)							
Epoch: [0][2190/2563]	Time	3.171 ( 1.644)	Data	2.457 ( 0.976)	Loss	3.4522e+00 (4.6702e+00)	Acc@1	29.40 ( 1
3.47) Acc@5	53.40 ( 30.31)							
Epoch: [0][2200/2563]	Time	2.461 ( 1.644)	Data	1.791 ( 0.976)	Loss	3.5716e+00 (4.6652e+00)	Acc@1	27.40 ( 1
3.53) Acc@5	50.40 ( 30.40)							
Epoch: [0][2210/2563]	Time	2.585 ( 1.644)	Data	1.866 ( 0.976)	Loss	3.5965e+00 (4.6599e+00)	Acc@1	27.20 ( 1

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Epoch: [0][2470/2563]	Time	2.316 ( 1.643)	Data	1.648 ( 0.973)	Loss	3.3597e+00 (4.5307e+00)	Acc@1	25.80 ( 1
5.05) Acc@5	55.80 ( 32.86)							
Epoch: [0][2480/2563]	Time	2.860 ( 1.643)	Data	2.139 ( 0.973)	Loss	3.4392e+00 (4.5261e+00)	Acc@1	26.60 ( 1
5.10) Acc@5	50.20 ( 32.94)							
Epoch: [0][2490/2563]	Time	2.551 ( 1.643)	Data	1.856 ( 0.973)	Loss	3.6889e+00 (4.5216e+00)	Acc@1	27.20 ( 1
5.16) Acc@5	48.40 ( 33.02)							
Epoch: [0][2500/2563]	Time	2.645 ( 1.643)	Data	1.918 ( 0.973)	Loss	3.1878e+00 (4.5168e+00)	Acc@1	31.80 ( 1
5.22) Acc@5	56.60 ( 33.11)							
Epoch: [0][2510/2563]	Time	2.464 ( 1.643)	Data	1.754 ( 0.973)	Loss	3.2117e+00 (4.5121e+00)	Acc@1	31.00 ( 1
5.27) Acc@5	54.60 ( 33.20)							
Epoch: [0][2520/2563]	Time	3.013 ( 1.643)	Data	2.288 ( 0.973)	Loss	3.1778e+00 (4.5073e+00)	Acc@1	29.20 ( 1
5.33) Acc@5	56.60 ( 33.28)							
Epoch: [0][2530/2563]	Time	2.881 ( 1.643)	Data	2.165 ( 0.973)	Loss	3.4337e+00 (4.5025e+00)	Acc@1	27.60 ( 1
5.39) Acc@5	52.80 ( 33.38)							
Epoch: [0][2540/2563]	Time	2.434 ( 1.643)	Data	1.773 ( 0.973)	Loss	3.1844e+00 (4.4976e+00)	Acc@1	33.80 ( 1
5.44) Acc@5	55.40 ( 33.46)							
Epoch: [0][2550/2563]	Time	2.582 ( 1.643)	Data	1.880 ( 0.973)	Loss	3.2859e+00 (4.4931e+00)	Acc@1	30.40 ( 1
5.50) Acc@5	54.60 ( 33.54)							
Epoch: [0][2560/2563]	Time	2.478 ( 1.643)	Data	1.799 ( 0.973)	Loss	3.2529e+00 (4.4882e+00)	Acc@1	32.20 ( 1
5.56) Acc@5	56.00 ( 33.63)							
Test: [ 0/100]	Time	6.483 ( 6.483)	Loss	3.9590e+00 (3.9590e+00)	Acc@1	29.00 ( 29.00)	Acc@5	48.40 ( 48.40)
Test: [ 10/100]	Time	2.963 ( 1.976)	Loss	3.9870e+00 (4.0170e+00)	Acc@1	21.00 ( 23.16)	Acc@5	44.40 ( 44.69)
Test: [ 20/100]	Time	2.865 ( 1.842)	Loss	4.3763e+00 (3.9825e+00)	Acc@1	10.00 ( 21.34)	Acc@5	33.80 ( 44.14)
Test: [ 30/100]	Time	2.885 ( 1.790)	Loss	3.3320e+00 (3.8490e+00)	Acc@1	24.80 ( 21.31)	Acc@5	54.60 ( 45.63)
Test: [ 40/100]	Time	2.547 ( 1.772)	Loss	3.2501e+00 (3.8563e+00)	Acc@1	33.00 ( 21.81)	Acc@5	59.20 ( 45.50)
Test: [ 50/100]	Time	2.774 ( 1.756)	Loss	5.0104e+00 (3.9624e+00)	Acc@1	10.80 ( 20.70)	Acc@5	25.20 ( 43.51)
Test: [ 60/100]	Time	2.779 ( 1.748)	Loss	4.0820e+00 (3.9786e+00)	Acc@1	19.40 ( 20.48)	Acc@5	40.80 ( 43.01)
Test: [ 70/100]	Time	2.950 ( 1.734)	Loss	4.8737e+00 (4.0098e+00)	Acc@1	9.40 ( 20.12)	Acc@5	27.00 ( 42.45)
Test: [ 80/100]	Time	2.940 ( 1.727)	Loss	4.0539e+00 (4.0500e+00)	Acc@1	23.20 ( 20.01)	Acc@5	41.80 ( 41.83)
Test: [ 90/100]	Time	2.892 ( 1.720)	Loss	4.2836e+00 (4.0748e+00)	Acc@1	20.20 ( 19.67)	Acc@5	40.40 ( 41.40)
* Acc@1 19.706 Acc@5 41.196								
lr: 0.05								
Epoch: [1][ 0/2563]	Time	4.411 ( 4.411)	Data	3.684 ( 3.684)	Loss	3.2238e+00 (3.2238e+00)	Acc@1	29.80 ( 2
9.80) Acc@5	56.80 ( 56.80)							
Epoch: [1][ 10/2563]	Time	2.504 ( 1.825)	Data	1.804 ( 1.149)	Loss	3.1083e+00 (3.1708e+00)	Acc@1	35.60 ( 3
2.91) Acc@5	58.40 ( 57.67)							
Epoch: [1][ 20/2563]	Time	2.560 ( 1.721)	Data	1.850 ( 1.046)	Loss	3.0561e+00 (3.1642e+00)	Acc@1	33.20 ( 3
2.79) Acc@5	58.40 ( 57.75)							
Epoch: [1][ 30/2563]	Time	2.363 ( 1.699)	Data	1.705 ( 1.022)	Loss	3.0806e+00 (3.1456e+00)	Acc@1	37.00 ( 3
2.87) Acc@5	58.80 ( 57.98)							
Epoch: [1][ 40/2563]	Time	2.563 ( 1.676)	Data	1.877 ( 0.998)	Loss	3.0295e+00 (3.1304e+00)	Acc@1	34.40 ( 3
3.28) Acc@5	60.00 ( 58.42)							
Epoch: [1][ 50/2563]	Time	2.489 ( 1.657)	Data	1.776 ( 0.980)	Loss	3.0413e+00 (3.1287e+00)	Acc@1	35.20 ( 3
3.35) Acc@5	59.80 ( 58.49)							
Epoch: [1][ 60/2563]	Time	2.454 ( 1.639)	Data	1.737 ( 0.963)	Loss	3.2110e+00 (3.1116e+00)	Acc@1	30.20 ( 3
3.50) Acc@5	57.00 ( 58.84)							
Epoch: [1][ 70/2563]	Time	2.299 ( 1.624)	Data	1.637 ( 0.948)	Loss	2.7541e+00 (3.1015e+00)	Acc@1	37.80 ( 3
3.48) Acc@5	64.80 ( 59.01)							
Epoch: [1][ 80/2563]	Time	2.354 ( 1.616)	Data	1.692 ( 0.941)	Loss	2.8702e+00 (3.0957e+00)	Acc@1	34.60 ( 3
3.47) Acc@5	62.40 ( 59.12)							
Epoch: [1][ 90/2563]	Time	2.109 ( 1.608)	Data	1.443 ( 0.934)	Loss	3.0488e+00 (3.0876e+00)	Acc@1	32.80 ( 3

[illegible]

Epoch: [1][ 350/2563]	Time 1.295 ( 1.600)	Data 0.629 ( 0.929)	Loss 2.9675e+00 (3.0145e+00)	Acc@1 35.00 ( 3
4.50) Acc@5 64.40 ( 60.71)				
Epoch: [1][ 360/2563]	Time 1.102 ( 1.599)	Data 0.436 ( 0.928)	Loss 3.0827e+00 (3.0131e+00)	Acc@1 34.20 ( 3
4.52) Acc@5 60.40 ( 60.74)				
Epoch: [1][ 370/2563]	Time 1.050 ( 1.599)	Data 0.385 ( 0.927)	Loss 2.9970e+00 (3.0101e+00)	Acc@1 36.20 ( 3
4.56) Acc@5 61.20 ( 60.78)				
Epoch: [1][ 380/2563]	Time 0.765 ( 1.598)	Data 0.098 ( 0.927)	Loss 2.9840e+00 (3.0090e+00)	Acc@1 34.00 ( 3
4.57) Acc@5 61.20 ( 60.81)				
Epoch: [1][ 390/2563]	Time 0.759 ( 1.598)	Data 0.098 ( 0.927)	Loss 2.6969e+00 (3.0053e+00)	Acc@1 40.60 ( 3
4.64) Acc@5 64.80 ( 60.87)				
Epoch: [1][ 400/2563]	Time 0.765 ( 1.599)	Data 0.097 ( 0.927)	Loss 3.0451e+00 (3.0041e+00)	Acc@1 35.00 ( 3
4.65) Acc@5 59.60 ( 60.91)				
Epoch: [1][ 410/2563]	Time 0.769 ( 1.599)	Data 0.104 ( 0.927)	Loss 2.9582e+00 (3.0026e+00)	Acc@1 37.00 ( 3
4.67) Acc@5 60.40 ( 60.93)				
Epoch: [1][ 420/2563]	Time 0.966 ( 1.598)	Data 0.301 ( 0.927)	Loss 2.9010e+00 (2.9997e+00)	Acc@1 39.60 ( 3
4.70) Acc@5 64.40 ( 60.99)				
Epoch: [1][ 430/2563]	Time 0.833 ( 1.599)	Data 0.166 ( 0.927)	Loss 3.0048e+00 (2.9982e+00)	Acc@1 34.60 ( 3
4.72) Acc@5 60.00 ( 61.02)				
Epoch: [1][ 440/2563]	Time 1.054 ( 1.599)	Data 0.388 ( 0.928)	Loss 2.8382e+00 (2.9959e+00)	Acc@1 35.00 ( 3
4.75) Acc@5 63.40 ( 61.06)				
Epoch: [1][ 450/2563]	Time 1.004 ( 1.599)	Data 0.339 ( 0.928)	Loss 2.7777e+00 (2.9951e+00)	Acc@1 41.20 ( 3
4.78) Acc@5 65.60 ( 61.07)				
Epoch: [1][ 460/2563]	Time 0.919 ( 1.600)	Data 0.254 ( 0.928)	Loss 2.9852e+00 (2.9942e+00)	Acc@1 37.20 ( 3
4.80) Acc@5 61.00 ( 61.08)				
Epoch: [1][ 470/2563]	Time 0.987 ( 1.600)	Data 0.320 ( 0.929)	Loss 2.9588e+00 (2.9929e+00)	Acc@1 33.60 ( 3
4.81) Acc@5 62.00 ( 61.11)				
Epoch: [1][ 480/2563]	Time 0.880 ( 1.600)	Data 0.213 ( 0.929)	Loss 2.9628e+00 (2.9916e+00)	Acc@1 33.20 ( 3
4.84) Acc@5 61.20 ( 61.13)				
Epoch: [1][ 490/2563]	Time 0.931 ( 1.600)	Data 0.262 ( 0.929)	Loss 2.8527e+00 (2.9892e+00)	Acc@1 38.20 ( 3
4.90) Acc@5 63.20 ( 61.17)				
Epoch: [1][ 500/2563]	Time 1.034 ( 1.600)	Data 0.372 ( 0.929)	Loss 3.0854e+00 (2.9890e+00)	Acc@1 35.40 ( 3
4.91) Acc@5 59.00 ( 61.17)				
Epoch: [1][ 510/2563]	Time 1.594 ( 1.601)	Data 0.930 ( 0.930)	Loss 2.8338e+00 (2.9872e+00)	Acc@1 39.00 ( 3
4.94) Acc@5 61.60 ( 61.20)				
Epoch: [1][ 520/2563]	Time 0.944 ( 1.601)	Data 0.278 ( 0.930)	Loss 2.9545e+00 (2.9863e+00)	Acc@1 35.20 ( 3
4.95) Acc@5 60.60 ( 61.21)				
Epoch: [1][ 530/2563]	Time 0.882 ( 1.601)	Data 0.218 ( 0.930)	Loss 3.0170e+00 (2.9849e+00)	Acc@1 36.60 ( 3
4.97) Acc@5 60.00 ( 61.22)				
Epoch: [1][ 540/2563]	Time 0.791 ( 1.600)	Data 0.127 ( 0.929)	Loss 2.8562e+00 (2.9828e+00)	Acc@1 39.60 ( 3
5.01) Acc@5 66.00 ( 61.26)				
Epoch: [1][ 550/2563]	Time 0.768 ( 1.600)	Data 0.101 ( 0.929)	Loss 2.7144e+00 (2.9809e+00)	Acc@1 38.00 ( 3
5.04) Acc@5 66.20 ( 61.30)				
Epoch: [1][ 560/2563]	Time 0.766 ( 1.600)	Data 0.099 ( 0.929)	Loss 3.0498e+00 (2.9800e+00)	Acc@1 32.40 ( 3
5.05) Acc@5 59.20 ( 61.30)				
Epoch: [1][ 570/2563]	Time 0.763 ( 1.599)	Data 0.096 ( 0.928)	Loss 2.9777e+00 (2.9785e+00)	Acc@1 38.00 ( 3
5.08) Acc@5 60.80 ( 61.31)				
Epoch: [1][ 580/2563]	Time 0.833 ( 1.598)	Data 0.168 ( 0.927)	Loss 3.0792e+00 (2.9776e+00)	Acc@1 35.20 ( 3
5.09) Acc@5 60.40 ( 61.33)				
Epoch: [1][ 590/2563]	Time 1.349 ( 1.599)	Data 0.680 ( 0.928)	Loss 2.9009e+00 (2.9758e+00)	Acc@1 37.60 ( 3
5.12) Acc@5 60.80 ( 61.36)				
Epoch: [1][ 600/2563]	Time 1.940 ( 1.599)	Data 1.276 ( 0.929)	Loss 3.0643e+00 (2.9745e+00)	Acc@1 36.00 ( 3



[illegible]

Epoch: [1][ 860/2563]	Time 0.766 ( 1.599)	Data 0.099 ( 0.928)	Loss 2.9896e+00 (2.9405e+00)	Acc@1 33.40 ( 3
5.74) Acc@5 60.20 ( 61.96)				
Epoch: [1][ 870/2563]	Time 0.769 ( 1.599)	Data 0.103 ( 0.928)	Loss 2.8315e+00 (2.9396e+00)	Acc@1 38.20 ( 3
5.76) Acc@5 63.80 ( 61.97)				
Epoch: [1][ 880/2563]	Time 0.759 ( 1.599)	Data 0.097 ( 0.928)	Loss 3.0073e+00 (2.9385e+00)	Acc@1 36.20 ( 3
5.78) Acc@5 58.40 ( 61.99)				
Epoch: [1][ 890/2563]	Time 0.760 ( 1.599)	Data 0.097 ( 0.929)	Loss 2.7354e+00 (2.9364e+00)	Acc@1 41.80 ( 3
5.82) Acc@5 65.00 ( 62.02)				
Epoch: [1][ 900/2563]	Time 1.248 ( 1.600)	Data 0.581 ( 0.929)	Loss 2.5472e+00 (2.9349e+00)	Acc@1 43.20 ( 3
5.84) Acc@5 67.80 ( 62.05)				
Epoch: [1][ 910/2563]	Time 0.981 ( 1.600)	Data 0.315 ( 0.930)	Loss 2.9331e+00 (2.9337e+00)	Acc@1 37.00 ( 3
5.87) Acc@5 63.60 ( 62.07)				
Epoch: [1][ 920/2563]	Time 1.600 ( 1.601)	Data 0.935 ( 0.930)	Loss 2.8242e+00 (2.9322e+00)	Acc@1 37.00 ( 3
5.89) Acc@5 63.80 ( 62.09)				
Epoch: [1][ 930/2563]	Time 1.893 ( 1.601)	Data 1.225 ( 0.930)	Loss 2.8344e+00 (2.9310e+00)	Acc@1 36.40 ( 3
5.90) Acc@5 63.40 ( 62.11)				
Epoch: [1][ 940/2563]	Time 1.885 ( 1.601)	Data 1.217 ( 0.930)	Loss 2.8561e+00 (2.9297e+00)	Acc@1 36.20 ( 3
5.92) Acc@5 64.40 ( 62.14)				
Epoch: [1][ 950/2563]	Time 1.499 ( 1.601)	Data 0.834 ( 0.931)	Loss 2.9139e+00 (2.9285e+00)	Acc@1 36.00 ( 3
5.94) Acc@5 61.20 ( 62.16)				
Epoch: [1][ 960/2563]	Time 1.056 ( 1.601)	Data 0.390 ( 0.930)	Loss 2.8985e+00 (2.9272e+00)	Acc@1 36.60 ( 3
5.96) Acc@5 64.00 ( 62.19)				
Epoch: [1][ 970/2563]	Time 0.889 ( 1.601)	Data 0.225 ( 0.931)	Loss 2.8596e+00 (2.9258e+00)	Acc@1 36.20 ( 3
5.99) Acc@5 62.80 ( 62.22)				
Epoch: [1][ 980/2563]	Time 0.761 ( 1.601)	Data 0.097 ( 0.931)	Loss 2.7214e+00 (2.9241e+00)	Acc@1 39.60 ( 3
6.01) Acc@5 65.60 ( 62.25)				
Epoch: [1][ 990/2563]	Time 0.669 ( 1.602)	Data 0.002 ( 0.931)	Loss 2.8056e+00 (2.9232e+00)	Acc@1 39.80 ( 3
6.03) Acc@5 65.80 ( 62.27)				
Epoch: [1][1000/2563]	Time 0.670 ( 1.602)	Data 0.002 ( 0.931)	Loss 2.7865e+00 (2.9217e+00)	Acc@1 38.20 ( 3
6.05) Acc@5 65.00 ( 62.30)				
Epoch: [1][1010/2563]	Time 0.668 ( 1.602)	Data 0.002 ( 0.932)	Loss 3.0042e+00 (2.9206e+00)	Acc@1 35.80 ( 3
6.06) Acc@5 58.40 ( 62.32)				
Epoch: [1][1020/2563]	Time 0.675 ( 1.602)	Data 0.002 ( 0.931)	Loss 2.7889e+00 (2.9187e+00)	Acc@1 37.80 ( 3
6.10) Acc@5 64.00 ( 62.35)				
Epoch: [1][1030/2563]	Time 0.667 ( 1.602)	Data 0.002 ( 0.931)	Loss 2.8019e+00 (2.9176e+00)	Acc@1 42.40 ( 3
6.13) Acc@5 65.00 ( 62.37)				
Epoch: [1][1040/2563]	Time 0.666 ( 1.603)	Data 0.002 ( 0.931)	Loss 2.8362e+00 (2.9168e+00)	Acc@1 38.60 ( 3
6.14) Acc@5 63.40 ( 62.38)				
Epoch: [1][1050/2563]	Time 0.671 ( 1.603)	Data 0.002 ( 0.931)	Loss 2.7990e+00 (2.9160e+00)	Acc@1 35.40 ( 3
6.15) Acc@5 64.20 ( 62.39)				
Epoch: [1][1060/2563]	Time 0.670 ( 1.603)	Data 0.003 ( 0.932)	Loss 2.7892e+00 (2.9141e+00)	Acc@1 40.20 ( 3
6.19) Acc@5 63.60 ( 62.43)				
Epoch: [1][1070/2563]	Time 0.762 ( 1.603)	Data 0.096 ( 0.931)	Loss 2.9601e+00 (2.9131e+00)	Acc@1 36.80 ( 3
6.21) Acc@5 63.80 ( 62.45)				
Epoch: [1][1080/2563]	Time 0.669 ( 1.603)	Data 0.003 ( 0.932)	Loss 2.6844e+00 (2.9119e+00)	Acc@1 40.80 ( 3
6.25) Acc@5 65.80 ( 62.47)				
Epoch: [1][1090/2563]	Time 0.668 ( 1.603)	Data 0.003 ( 0.931)	Loss 2.7523e+00 (2.9104e+00)	Acc@1 41.40 ( 3
6.28) Acc@5 65.00 ( 62.49)				
Epoch: [1][1100/2563]	Time 0.668 ( 1.603)	Data 0.003 ( 0.931)	Loss 2.8728e+00 (2.9094e+00)	Acc@1 37.20 ( 3
6.30) Acc@5 61.80 ( 62.51)				
Epoch: [1][1110/2563]	Time 0.668 ( 1.603)	Data 0.003 ( 0.931)	Loss 2.8398e+00 (2.9085e+00)	Acc@1 38.00 ( 3

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Epoch: [1][1370/2563]	Time 2.348 ( 1.605)	Data 1.680 ( 0.934)	Loss 2.6843e+00 (2.8855e+00)	Acc@1 38.40 ( 3
6.72) Acc@5 64.40 ( 62.97)				
Epoch: [1][1380/2563]	Time 2.550 ( 1.605)	Data 1.836 ( 0.934)	Loss 2.7490e+00 (2.8842e+00)	Acc@1 39.80 ( 3
6.74) Acc@5 65.40 ( 62.99)				
Epoch: [1][1390/2563]	Time 2.212 ( 1.605)	Data 1.547 ( 0.934)	Loss 2.6381e+00 (2.8830e+00)	Acc@1 40.00 ( 3
6.76) Acc@5 68.40 ( 63.01)				
Epoch: [1][1400/2563]	Time 1.459 ( 1.605)	Data 0.792 ( 0.934)	Loss 2.7574e+00 (2.8820e+00)	Acc@1 38.60 ( 3
6.78) Acc@5 66.20 ( 63.02)				
Epoch: [1][1410/2563]	Time 1.240 ( 1.605)	Data 0.575 ( 0.934)	Loss 2.6453e+00 (2.8809e+00)	Acc@1 38.80 ( 3
6.80) Acc@5 66.40 ( 63.05)				
Epoch: [1][1420/2563]	Time 1.360 ( 1.605)	Data 0.696 ( 0.934)	Loss 2.6577e+00 (2.8798e+00)	Acc@1 39.00 ( 3
6.82) Acc@5 67.80 ( 63.07)				
Epoch: [1][1430/2563]	Time 1.638 ( 1.605)	Data 0.970 ( 0.934)	Loss 2.7984e+00 (2.8787e+00)	Acc@1 40.00 ( 3
6.83) Acc@5 64.20 ( 63.09)				
Epoch: [1][1440/2563]	Time 1.811 ( 1.605)	Data 1.144 ( 0.934)	Loss 2.8922e+00 (2.8776e+00)	Acc@1 36.00 ( 3
6.85) Acc@5 64.00 ( 63.11)				
Epoch: [1][1450/2563]	Time 1.653 ( 1.605)	Data 0.988 ( 0.934)	Loss 2.7274e+00 (2.8764e+00)	Acc@1 40.00 ( 3
6.88) Acc@5 68.80 ( 63.14)				
Epoch: [1][1460/2563]	Time 1.670 ( 1.605)	Data 1.007 ( 0.934)	Loss 2.7031e+00 (2.8752e+00)	Acc@1 38.00 ( 3
6.90) Acc@5 67.80 ( 63.16)				
Epoch: [1][1470/2563]	Time 1.353 ( 1.605)	Data 0.691 ( 0.934)	Loss 2.7009e+00 (2.8738e+00)	Acc@1 40.80 ( 3
6.92) Acc@5 66.60 ( 63.18)				
Epoch: [1][1480/2563]	Time 1.478 ( 1.605)	Data 0.813 ( 0.934)	Loss 2.7567e+00 (2.8732e+00)	Acc@1 39.20 ( 3
6.92) Acc@5 64.80 ( 63.19)				
Epoch: [1][1490/2563]	Time 1.408 ( 1.605)	Data 0.742 ( 0.934)	Loss 2.7198e+00 (2.8721e+00)	Acc@1 41.00 ( 3
6.94) Acc@5 66.00 ( 63.21)				
Epoch: [1][1500/2563]	Time 0.926 ( 1.604)	Data 0.258 ( 0.934)	Loss 2.5678e+00 (2.8710e+00)	Acc@1 41.80 ( 3
6.96) Acc@5 68.00 ( 63.23)				
Epoch: [1][1510/2563]	Time 0.795 ( 1.604)	Data 0.129 ( 0.933)	Loss 2.5453e+00 (2.8698e+00)	Acc@1 38.80 ( 3
6.99) Acc@5 71.80 ( 63.25)				
Epoch: [1][1520/2563]	Time 0.676 ( 1.605)	Data 0.002 ( 0.934)	Loss 2.9442e+00 (2.8689e+00)	Acc@1 35.20 ( 3
7.01) Acc@5 63.20 ( 63.27)				
Epoch: [1][1530/2563]	Time 0.764 ( 1.604)	Data 0.096 ( 0.933)	Loss 2.6021e+00 (2.8680e+00)	Acc@1 43.60 ( 3
7.02) Acc@5 69.60 ( 63.29)				
Epoch: [1][1540/2563]	Time 0.762 ( 1.604)	Data 0.097 ( 0.933)	Loss 2.7456e+00 (2.8670e+00)	Acc@1 43.00 ( 3
7.04) Acc@5 66.20 ( 63.31)				
Epoch: [1][1550/2563]	Time 0.761 ( 1.604)	Data 0.098 ( 0.933)	Loss 2.7019e+00 (2.8658e+00)	Acc@1 38.60 ( 3
7.06) Acc@5 64.80 ( 63.33)				
Epoch: [1][1560/2563]	Time 0.761 ( 1.604)	Data 0.098 ( 0.933)	Loss 2.7233e+00 (2.8647e+00)	Acc@1 39.00 ( 3
7.08) Acc@5 65.20 ( 63.35)				
Epoch: [1][1570/2563]	Time 0.936 ( 1.604)	Data 0.271 ( 0.933)	Loss 2.7825e+00 (2.8638e+00)	Acc@1 37.20 ( 3
7.10) Acc@5 62.80 ( 63.37)				
Epoch: [1][1580/2563]	Time 0.762 ( 1.604)	Data 0.097 ( 0.933)	Loss 2.8371e+00 (2.8631e+00)	Acc@1 40.40 ( 3
7.11) Acc@5 62.60 ( 63.38)				
Epoch: [1][1590/2563]	Time 0.857 ( 1.604)	Data 0.193 ( 0.933)	Loss 2.6568e+00 (2.8622e+00)	Acc@1 40.80 ( 3
7.12) Acc@5 67.00 ( 63.39)				
Epoch: [1][1600/2563]	Time 0.759 ( 1.604)	Data 0.098 ( 0.933)	Loss 2.6923e+00 (2.8613e+00)	Acc@1 37.20 ( 3
7.14) Acc@5 65.40 ( 63.41)				
Epoch: [1][1610/2563]	Time 0.670 ( 1.604)	Data 0.002 ( 0.933)	Loss 2.7192e+00 (2.8601e+00)	Acc@1 41.00 ( 3
7.16) Acc@5 66.40 ( 63.43)				
Epoch: [1][1620/2563]	Time 0.764 ( 1.604)	Data 0.098 ( 0.933)	Loss 2.8475e+00 (2.8591e+00)	Acc@1 36.40 ( 3

7.17)	Acc@5	62.80 ( 63.44)									
Epoch: [1][1630/2563]	Time	1.272 ( 1.605)	Data	0.605 ( 0.934)	Loss	2.7330e+00 (2.8581e+00)	Acc@1	38.60 ( 3			
7.19)	Acc@5	65.40 ( 63.46)									
Epoch: [1][1640/2563]	Time	1.254 ( 1.605)	Data	0.590 ( 0.934)	Loss	2.7299e+00 (2.8569e+00)	Acc@1	41.60 ( 3			
7.21)	Acc@5	63.80 ( 63.48)									
Epoch: [1][1650/2563]	Time	1.319 ( 1.605)	Data	0.654 ( 0.934)	Loss	2.5617e+00 (2.8557e+00)	Acc@1	41.20 ( 3			
7.22)	Acc@5	69.00 ( 63.50)									
Epoch: [1][1660/2563]	Time	1.582 ( 1.605)	Data	0.919 ( 0.934)	Loss	2.5267e+00 (2.8545e+00)	Acc@1	45.60 ( 3			
7.24)	Acc@5	67.80 ( 63.52)									
Epoch: [1][1670/2563]	Time	1.473 ( 1.605)	Data	0.808 ( 0.934)	Loss	2.7400e+00 (2.8535e+00)	Acc@1	39.80 ( 3			
7.26)	Acc@5	66.40 ( 63.54)									
Epoch: [1][1680/2563]	Time	1.469 ( 1.605)	Data	0.802 ( 0.934)	Loss	2.6285e+00 (2.8524e+00)	Acc@1	42.00 ( 3			
7.27)	Acc@5	68.60 ( 63.56)									
Epoch: [1][1690/2563]	Time	0.968 ( 1.605)	Data	0.304 ( 0.934)	Loss	2.6097e+00 (2.8514e+00)	Acc@1	40.20 ( 3			
7.29)	Acc@5	68.60 ( 63.57)									
Epoch: [1][1700/2563]	Time	0.766 ( 1.605)	Data	0.100 ( 0.934)	Loss	2.6985e+00 (2.8504e+00)	Acc@1	40.60 ( 3			
7.31)	Acc@5	67.40 ( 63.59)									
Epoch: [1][1710/2563]	Time	0.668 ( 1.605)	Data	0.002 ( 0.934)	Loss	2.5838e+00 (2.8497e+00)	Acc@1	42.40 ( 3			
7.32)	Acc@5	67.80 ( 63.60)									
Epoch: [1][1720/2563]	Time	0.669 ( 1.605)	Data	0.003 ( 0.934)	Loss	2.6009e+00 (2.8488e+00)	Acc@1	38.60 ( 3			
7.34)	Acc@5	68.00 ( 63.62)									
Epoch: [1][1730/2563]	Time	0.764 ( 1.605)	Data	0.100 ( 0.934)	Loss	2.6106e+00 (2.8479e+00)	Acc@1	41.40 ( 3			
7.35)	Acc@5	67.00 ( 63.64)									
Epoch: [1][1740/2563]	Time	0.772 ( 1.605)	Data	0.104 ( 0.934)	Loss	2.6984e+00 (2.8466e+00)	Acc@1	37.80 ( 3			
7.37)	Acc@5	67.60 ( 63.66)									
Epoch: [1][1750/2563]	Time	1.039 ( 1.605)	Data	0.375 ( 0.934)	Loss	2.7405e+00 (2.8457e+00)	Acc@1	37.20 ( 3			
7.38)	Acc@5	65.00 ( 63.67)									
Epoch: [1][1760/2563]	Time	0.772 ( 1.605)	Data	0.106 ( 0.934)	Loss	2.5125e+00 (2.8446e+00)	Acc@1	42.60 ( 3			
7.41)	Acc@5	68.20 ( 63.69)									
Epoch: [1][1770/2563]	Time	0.671 ( 1.605)	Data	0.002 ( 0.933)	Loss	2.6475e+00 (2.8435e+00)	Acc@1	42.00 ( 3			
7.43)	Acc@5	67.00 ( 63.71)									
Epoch: [1][1780/2563]	Time	0.811 ( 1.605)	Data	0.145 ( 0.933)	Loss	2.7169e+00 (2.8425e+00)	Acc@1	39.60 ( 3			
7.45)	Acc@5	64.40 ( 63.72)									
Epoch: [1][1790/2563]	Time	0.667 ( 1.605)	Data	0.003 ( 0.933)	Loss	2.6664e+00 (2.8414e+00)	Acc@1	38.80 ( 3			
7.46)	Acc@5	65.60 ( 63.74)									
Epoch: [1][1800/2563]	Time	0.669 ( 1.604)	Data	0.002 ( 0.933)	Loss	2.7516e+00 (2.8405e+00)	Acc@1	41.80 ( 3			
7.48)	Acc@5	66.40 ( 63.76)									
Epoch: [1][1810/2563]	Time	0.670 ( 1.604)	Data	0.002 ( 0.933)	Loss	2.5774e+00 (2.8395e+00)	Acc@1	39.80 ( 3			
7.50)	Acc@5	66.00 ( 63.78)									
Epoch: [1][1820/2563]	Time	0.764 ( 1.604)	Data	0.099 ( 0.933)	Loss	2.6124e+00 (2.					

Epoch: [1][1880/2563]	Time 1.963 ( 1.605)	Data 1.302 ( 0.934)	Loss 2.5158e+00 (2.8326e+00)	Acc@1 42.00 ( 3
7.62) Acc@5 69.40 ( 63.89)				
Epoch: [1][1890/2563]	Time 2.321 ( 1.605)	Data 1.658 ( 0.934)	Loss 2.5678e+00 (2.8314e+00)	Acc@1 39.00 ( 3
7.64) Acc@5 69.60 ( 63.91)				
Epoch: [1][1900/2563]	Time 2.345 ( 1.605)	Data 1.683 ( 0.934)	Loss 2.5482e+00 (2.8302e+00)	Acc@1 41.80 ( 3
7.66) Acc@5 68.40 ( 63.93)				
Epoch: [1][1910/2563]	Time 2.291 ( 1.605)	Data 1.626 ( 0.934)	Loss 2.6135e+00 (2.8291e+00)	Acc@1 39.20 ( 3
7.67) Acc@5 67.40 ( 63.95)				
Epoch: [1][1920/2563]	Time 2.467 ( 1.605)	Data 1.800 ( 0.934)	Loss 2.4869e+00 (2.8280e+00)	Acc@1 42.80 ( 3
7.70) Acc@5 70.80 ( 63.97)				
Epoch: [1][1930/2563]	Time 2.055 ( 1.605)	Data 1.392 ( 0.934)	Loss 2.6369e+00 (2.8264e+00)	Acc@1 39.20 ( 3
7.73) Acc@5 69.20 ( 64.00)				
Epoch: [1][1940/2563]	Time 2.403 ( 1.605)	Data 1.713 ( 0.934)	Loss 2.6580e+00 (2.8255e+00)	Acc@1 41.60 ( 3
7.74) Acc@5 68.00 ( 64.01)				
Epoch: [1][1950/2563]	Time 2.199 ( 1.605)	Data 1.533 ( 0.934)	Loss 2.6786e+00 (2.8246e+00)	Acc@1 40.80 ( 3
7.76) Acc@5 66.80 ( 64.03)				
Epoch: [1][1960/2563]	Time 2.812 ( 1.605)	Data 2.087 ( 0.934)	Loss 2.7480e+00 (2.8236e+00)	Acc@1 39.80 ( 3
7.78) Acc@5 66.60 ( 64.04)				
Epoch: [1][1970/2563]	Time 2.462 ( 1.605)	Data 1.793 ( 0.934)	Loss 2.7949e+00 (2.8228e+00)	Acc@1 36.40 ( 3
7.79) Acc@5 65.40 ( 64.06)				
Epoch: [1][1980/2563]	Time 2.226 ( 1.605)	Data 1.558 ( 0.934)	Loss 2.6533e+00 (2.8218e+00)	Acc@1 41.20 ( 3
7.81) Acc@5 67.00 ( 64.08)				
Epoch: [1][1990/2563]	Time 2.365 ( 1.605)	Data 1.702 ( 0.934)	Loss 2.5759e+00 (2.8208e+00)	Acc@1 42.60 ( 3
7.82) Acc@5 68.20 ( 64.10)				
Epoch: [1][2000/2563]	Time 2.129 ( 1.605)	Data 1.465 ( 0.934)	Loss 2.6182e+00 (2.8197e+00)	Acc@1 41.20 ( 3
7.85) Acc@5 66.60 ( 64.12)				
Epoch: [1][2010/2563]	Time 1.760 ( 1.605)	Data 1.093 ( 0.934)	Loss 2.6745e+00 (2.8187e+00)	Acc@1 39.60 ( 3
7.86) Acc@5 68.20 ( 64.13)				
Epoch: [1][2020/2563]	Time 1.952 ( 1.605)	Data 1.291 ( 0.934)	Loss 2.7055e+00 (2.8178e+00)	Acc@1 41.00 ( 3
7.88) Acc@5 66.40 ( 64.15)				
Epoch: [1][2030/2563]	Time 1.865 ( 1.605)	Data 1.197 ( 0.933)	Loss 2.6503e+00 (2.8165e+00)	Acc@1 41.20 ( 3
7.90) Acc@5 67.20 ( 64.17)				
Epoch: [1][2040/2563]	Time 1.887 ( 1.604)	Data 1.223 ( 0.933)	Loss 2.5236e+00 (2.8158e+00)	Acc@1 41.00 ( 3
7.91) Acc@5 70.20 ( 64.18)				
Epoch: [1][2050/2563]	Time 2.244 ( 1.605)	Data 1.577 ( 0.934)	Loss 2.7552e+00 (2.8149e+00)	Acc@1 41.60 ( 3
7.93) Acc@5 66.80 ( 64.21)				
Epoch: [1][2060/2563]	Time 2.483 ( 1.605)	Data 1.766 ( 0.934)	Loss 2.6525e+00 (2.8140e+00)	Acc@1 42.00 ( 3
7.95) Acc@5 67.60 ( 64.22)				
Epoch: [1][2070/2563]	Time 2.597 ( 1.605)	Data 1.882 ( 0.933)	Loss 2.5130e+00 (2.8129e+00)	Acc@1 43.00 ( 3
7.97) Acc@5 67.80 ( 64.24)				
Epoch: [1][2080/2563]	Time 2.329 ( 1.604)	Data 1.667 ( 0.933)	Loss 2.6315e+00 (2.8119e+00)	Acc@1 41.40 ( 3
7.98) Acc@5 67.60 ( 64.26)				
Epoch: [1][2090/2563]	Time 2.322 ( 1.604)	Data 1.656 ( 0.933)	Loss 2.6994e+00 (2.8110e+00)	Acc@1 41.00 ( 3
8.00) Acc@5 65.40 ( 64.28)				
Epoch: [1][2100/2563]	Time 2.471 ( 1.604)	Data 1.808 ( 0.933)	Loss 2.4611e+00 (2.8100e+00)	Acc@1 41.20 ( 3
8.01) Acc@5 68.60 ( 64.29)				
Epoch: [1][2110/2563]	Time 1.991 ( 1.604)	Data 1.326 ( 0.933)	Loss 2.5424e+00 (2.8092e+00)	Acc@1 44.20 ( 3
8.03) Acc@5 69.80 ( 64.30)				
Epoch: [1][2120/2563]	Time 1.819 ( 1.604)	Data 1.158 ( 0.933)	Loss 2.4770e+00 (2.8082e+00)	Acc@1 42.60 ( 3
8.04) Acc@5 72.60 ( 64.32)				
Epoch: [1][2130/2563]	Time 1.709 ( 1.604)	Data 1.049 ( 0.933)	Loss 2.7975e+00 (2.8076e+00)	Acc@1 36.60 ( 3

[illegible]

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Epoch: [1][2390/2563] Time 2.516 ( 1.603) Data 1.805 ( 0.933) Loss 2.5110e+00 (2.7831e+00) Acc@1 43.20 ( 3
8.49) Acc@5 69.20 ( 64.75)
Epoch: [1][2400/2563] Time 2.381 ( 1.603) Data 1.703 ( 0.933) Loss 2.8270e+00 (2.7825e+00) Acc@1 40.00 ( 3
8.50) Acc@5 63.60 ( 64.77)
Epoch: [1][2410/2563] Time 2.775 ( 1.603) Data 2.075 ( 0.933) Loss 2.4689e+00 (2.7814e+00) Acc@1 43.60 ( 3
8.52) Acc@5 70.00 ( 64.79)
Epoch: [1][2420/2563] Time 2.724 ( 1.603) Data 2.013 ( 0.933) Loss 2.5419e+00 (2.7806e+00) Acc@1 42.00 ( 3
8.53) Acc@5 70.80 ( 64.80)
Epoch: [1][2430/2563] Time 2.772 ( 1.604) Data 2.044 ( 0.933) Loss 2.5659e+00 (2.7796e+00) Acc@1 43.20 ( 3
8.55) Acc@5 67.40 ( 64.82)
Epoch: [1][2440/2563] Time 2.427 ( 1.604) Data 1.765 ( 0.933) Loss 2.5278e+00 (2.7786e+00) Acc@1 43.40 ( 3
8.56) Acc@5 70.00 ( 64.84)
Epoch: [1][2450/2563] Time 2.597 ( 1.604) Data 1.872 ( 0.933) Loss 2.4110e+00 (2.7777e+00) Acc@1 47.20 ( 3
8.59) Acc@5 71.20 ( 64.86)
Epoch: [1][2460/2563] Time 2.640 ( 1.604) Data 1.916 ( 0.933) Loss 2.5104e+00 (2.7768e+00) Acc@1 43.20 ( 3
8.60) Acc@5 68.80 ( 64.87)
Epoch: [1][2470/2563] Time 2.617 ( 1.604) Data 1.895 ( 0.933) Loss 2.6178e+00 (2.7759e+00) Acc@1 42.40 ( 3
8.62) Acc@5 68.00 ( 64.89)
Epoch: [1][2480/2563] Time 2.677 ( 1.604) Data 1.950 ( 0.933) Loss 2.5048e+00 (2.7750e+00) Acc@1 40.60 ( 3
8.64) Acc@5 69.40 ( 64.90)
Epoch: [1][2490/2563] Time 2.513 ( 1.604) Data 1.795 ( 0.933) Loss 2.5673e+00 (2.7741e+00) Acc@1 43.20 ( 3
8.65) Acc@5 69.20 ( 64.92)
Epoch: [1][2500/2563] Time 2.574 ( 1.604) Data 1.869 ( 0.933) Loss 2.7587e+00 (2.7733e+00) Acc@1 39.60 ( 3
8.67) Acc@5 64.60 ( 64.93)
Epoch: [1][2510/2563] Time 2.517 ( 1.604) Data 1.853 ( 0.933) Loss 2.6452e+00 (2.7726e+00) Acc@1 44.00 ( 3
8.68) Acc@5 69.00 ( 64.95)
Epoch: [1][2520/2563] Time 2.428 ( 1.603) Data 1.756 ( 0.932) Loss 2.6210e+00 (2.7716e+00) Acc@1 41.00 ( 3
8.70) Acc@5 65.40 ( 64.96)
Epoch: [1][2530/2563] Time 2.487 ( 1.603) Data 1.778 ( 0.932) Loss 2.6311e+00 (2.7711e+00) Acc@1 40.00 ( 3
8.71) Acc@5 68.40 ( 64.97)
Epoch: [1][2540/2563] Time 2.455 ( 1.603) Data 1.789 ( 0.932) Loss 2.4217e+00 (2.7700e+00) Acc@1 43.60 ( 3
8.73) Acc@5 73.00 ( 64.99)
Epoch: [1][2550/2563] Time 2.398 ( 1.603) Data 1.737 ( 0.932) Loss 2.4968e+00 (2.7690e+00) Acc@1 42.00 ( 3
8.74) Acc@5 70.00 ( 65.01)
Epoch: [1][2560/2563] Time 2.516 ( 1.603) Data 1.819 ( 0.932) Loss 2.5480e+00 (2.7681e+00) Acc@1 42.80 ( 3
8.76) Acc@5 70.60 ( 65.03)
Test: [ 0/100] Time 4.330 ( 4.330) Loss 2.1737e+00 (2.1737e+00) Acc@1 52.40 ( 52.40) Acc@5 77.00 ( 77.00)
Test: [ 10/100] Time 2.921 ( 1.946) Loss 2.2649e+00 (2.6023e+00) Acc@1 50.80 ( 43.71) Acc@5 73.00 ( 68.35)
Test: [ 20/100] Time 2.814 ( 1.824) Loss 2.8596e+00 (2.6530e+00) Acc@1 28.20 ( 39.93) Acc@5 60.20 ( 67.29)
Test: [ 30/100] Time 2.884 ( 1.780) Loss 2.2167e+00 (2.5915e+00) Acc@1 46.20 ( 39.62) Acc@5 73.80 ( 68.55)
Test: [ 40/100] Time 2.654 ( 1.763) Loss 2.8088e+00 (2.6115e+00) Acc@1 36.40 ( 39.54) Acc@5 64.40 ( 68.16)
Test: [ 50/100] Time 2.757 ( 1.748) Loss 3.5327e+00 (2.7415e+00) Acc@1 25.20 ( 37.62) Acc@5 48.80 ( 65.88)
Test: [ 60/100] Time 2.744 ( 1.742) Loss 2.9725e+00 (2.7934e+00) Acc@1 40.20 ( 37.20) Acc@5 59.60 ( 64.73)
Test: [ 70/100] Time 2.839 ( 1.730) Loss 3.5670e+00 (2.8491e+00) Acc@1 23.60 ( 36.54) Acc@5 53.40 ( 63.78)
Test: [ 80/100] Time 2.913 ( 1.723) Loss 2.8902e+00 (2.9103e+00) Acc@1 39.80 ( 35.98) Acc@5 58.80 ( 62.63)
Test: [ 90/100] Time 2.933 ( 1.715) Loss 3.4774e+00 (2.9609e+00) Acc@1 28.20 ( 35.24) Acc@5 52.60 ( 61.65)
* Acc@1 35.722 Acc@5 62.130
lr: 0.0

```

In [47]: `writer.close()`



```
%load_ext tensorboard
%tensorboard --logdir=runs
```

# Index of /

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Name	Size	Date Modified
<a href="#">.vol/</a>		1/1/20, 12:00:00 AM
<a href="#">Applications/</a>		10/28/21, 12:44:07 AM
<a href="#">bin/</a>		1/1/20, 12:00:00 AM
<a href="#">cores/</a>		6/5/20, 4:55:45 PM
<a href="#">dev/</a>		10/30/21, 11:18:08 AM
<a href="#">etc/</a>		10/15/21, 12:23:15 PM
<a href="#">home/</a>		10/30/21, 11:24:08 PM
<a href="#">Library/</a>		10/15/21, 12:22:52 PM
<a href="#">opt/</a>		2/21/21, 9:52:50 PM
<a href="#">private/</a>		1/1/20, 12:00:00 AM
<a href="#">sbin/</a>		1/1/20, 12:00:00 AM
<a href="#">System/</a>		1/1/20, 12:00:00 AM
<a href="#">tmp/</a>		10/31/21, 4:35:04 AM
<a href="#">Users/</a>		10/15/21, 11:19:49 AM
<a href="#">usr/</a>		1/1/20, 12:00:00 AM
<a href="#">var/</a>		10/15/21, 11:19:51 AM
<a href="#">Volumes/</a>		10/30/21, 11:18:19 AM
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<a href="#">.VolumeIcon.icns</a>	0 B	

