

Netzwerk Training

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Reloaded modules: provider, ModelNet40_DataLoader, pointnet_cls, pointnet
PARAMETER ...
Namespace(batch_size=12, decay_rate=0.0001, epoch=50, gpu='4', learning_rate=0.001, log_dir=None, model='pointnet_cls', normal=False,
num_point=1024, optimizer='Adam')
Load dataset ...
The size of train data is 9843
The size of test data is 2468
No existing model, starting training from scratch...
Epoch 1 (1/50):
  batch 0 loss: tensor(3.9373, device='cuda:0', grad_fn=<AddBackward0>)
  batch 1 loss: tensor(3.8360, device='cuda:0', grad_fn=<AddBackward0>)
  batch 2 loss: tensor(3.8554, device='cuda:0', grad_fn=<AddBackward0>)
  batch 3 loss: tensor(3.7780, device='cuda:0', grad_fn=<AddBackward0>)
  batch 4 loss: tensor(3.7395, device='cuda:0', grad_fn=<AddBackward0>)
  batch 5 loss: tensor(3.6712, device='cuda:0', grad_fn=<AddBackward0>)
  batch 6 loss: tensor(3.7943, device='cuda:0', grad_fn=<AddBackward0>)
  batch 7 loss: tensor(3.8410, device='cuda:0', grad_fn=<AddBackward0>)
  batch 8 loss: tensor(3.6308, device='cuda:0', grad_fn=<AddBackward0>)
  batch 9 loss: tensor(3.6828, device='cuda:0', grad_fn=<AddBackward0>)
  batch 10 loss: tensor(3.6802, device='cuda:0', grad_fn=<AddBackward0>)
  batch 11 loss: tensor(3.6494, device='cuda:0', grad_fn=<AddBackward0>)
  batch 12 loss: tensor(3.5863, device='cuda:0', grad_fn=<AddBackward0>)
  batch 13 loss: tensor(3.5200, device='cuda:0', grad_fn=<AddBackward0>)
  batch 14 loss: tensor(3.6003, device='cuda:0', grad_fn=<AddBackward0>)
  batch 15 loss: tensor(4.2158, device='cuda:0', grad_fn=<AddBackward0>)
  batch 16 loss: tensor(3.8342, device='cuda:0', grad_fn=<AddBackward0>)
  batch 17 loss: tensor(3.8641, device='cuda:0', grad_fn=<AddBackward0>)
  batch 18 loss: tensor(3.5914, device='cuda:0', grad_fn=<AddBackward0>)
  batch 19 loss: tensor(3.6919, device='cuda:0', grad_fn=<AddBackward0>)
  batch 20 loss: tensor(3.4647, device='cuda:0', grad_fn=<AddBackward0>)
  batch 21 loss: tensor(4.1400, device='cuda:0', grad_fn=<AddBackward0>)
  batch 22 loss: tensor(3.7529, device='cuda:0', grad_fn=<AddBackward0>)
  batch 23 loss: tensor(3.8512, device='cuda:0', grad_fn=<AddBackward0>)
  batch 24 loss: tensor(3.7656, device='cuda:0', grad_fn=<AddBackward0>)
  batch 25 loss: tensor(3.5335, device='cuda:0', grad_fn=<AddBackward0>)
  batch 26 loss: tensor(3.6482, device='cuda:0', grad_fn=<AddBackward0>)
  batch 27 loss: tensor(3.4356, device='cuda:0', grad_fn=<AddBackward0>)
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Epoch = 50 情况下的运行结果

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batch 785 loss: tensor(0.4348, device='cuda:0', grad_fn=<AddBackward0>)
batch 786 loss: tensor(0.3280, device='cuda:0', grad_fn=<AddBackward0>)
batch 787 loss: tensor(0.0500, device='cuda:0', grad_fn=<AddBackward0>)
batch 788 loss: tensor(0.2608, device='cuda:0', grad_fn=<AddBackward0>)
batch 789 loss: tensor(0.2826, device='cuda:0', grad_fn=<AddBackward0>)
batch 790 loss: tensor(0.1837, device='cuda:0', grad_fn=<AddBackward0>)
batch 791 loss: tensor(0.2603, device='cuda:0', grad_fn=<AddBackward0>)
batch 792 loss: tensor(0.3378, device='cuda:0', grad_fn=<AddBackward0>)
batch 793 loss: tensor(0.5911, device='cuda:0', grad_fn=<AddBackward0>)
batch 794 loss: tensor(0.7182, device='cuda:0', grad_fn=<AddBackward0>)
batch 795 loss: tensor(0.1371, device='cuda:0', grad_fn=<AddBackward0>)
batch 796 loss: tensor(0.2709, device='cuda:0', grad_fn=<AddBackward0>)
batch 797 loss: tensor(0.6040, device='cuda:0', grad_fn=<AddBackward0>)
batch 798 loss: tensor(0.6590, device='cuda:0', grad_fn=<AddBackward0>)
batch 799 loss: tensor(1.1871, device='cuda:0', grad_fn=<AddBackward0>)
batch 800 loss: tensor(0.5130, device='cuda:0', grad_fn=<AddBackward0>)
batch 801 loss: tensor(0.6048, device='cuda:0', grad_fn=<AddBackward0>)
batch 802 loss: tensor(0.6821, device='cuda:0', grad_fn=<AddBackward0>)
batch 803 loss: tensor(0.1077, device='cuda:0', grad_fn=<AddBackward0>)
batch 804 loss: tensor(0.2267, device='cuda:0', grad_fn=<AddBackward0>)
batch 805 loss: tensor(0.3529, device='cuda:0', grad_fn=<AddBackward0>)
batch 806 loss: tensor(0.1518, device='cuda:0', grad_fn=<AddBackward0>)
batch 807 loss: tensor(0.3140, device='cuda:0', grad_fn=<AddBackward0>)
batch 808 loss: tensor(0.1705, device='cuda:0', grad_fn=<AddBackward0>)
batch 809 loss: tensor(0.2627, device='cuda:0', grad_fn=<AddBackward0>)
batch 810 loss: tensor(0.0560, device='cuda:0', grad_fn=<AddBackward0>)
batch 811 loss: tensor(0.4403, device='cuda:0', grad_fn=<AddBackward0>)
batch 812 loss: tensor(0.3125, device='cuda:0', grad_fn=<AddBackward0>)
batch 813 loss: tensor(0.7032, device='cuda:0', grad_fn=<AddBackward0>)
batch 814 loss: tensor(0.2112, device='cuda:0', grad_fn=<AddBackward0>)
batch 815 loss: tensor(0.4578, device='cuda:0', grad_fn=<AddBackward0>)
batch 816 loss: tensor(0.4186, device='cuda:0', grad_fn=<AddBackward0>)
batch 817 loss: tensor(0.4121, device='cuda:0', grad_fn=<AddBackward0>)
batch 818 loss: tensor(1.5734, device='cuda:0', grad_fn=<AddBackward0>)
batch 819 loss: tensor(0.1787, device='cuda:0', grad_fn=<AddBackward0>)
batch 820 loss: tensor(0.7994, device='cuda:0', grad_fn=<AddBackward0>)
epoch 49 total training loss = 0.394
Train Instance Accuracy: 0.795102
Test Instance Accuracy: 0.872371, Class Accuracy: 0.810628
Best Instance Accuracy: 0.884304, Class Accuracy: 0.831178
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Test的结果（提前给定的check point）

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Reloaded modules: ModelNet40_DataLoader, pointnet_cls, pointnet
PARAMETER ...
Namespace(batch_size=24, gpu='0', log_dir='pointnet_cls', normal=False, num_point=1024, num_votes=3)
Load dataset ...
The size of test data is 2468
Test Instance Accuracy: 0.888835, Class Accuracy: 0.842594
```