

```
1 D:\Anaconda\envs\DL\python.exe D:/
  Python\pycharm\pycharm/test1/test1.py
2 =====
3 Python 版本: 3.9.22
4 NumPy 版本: 1.21.6
5 PyTorch 版本: 1.12.0+cu113
6 Torchvision 版本: 0.13.0
7 Matplotlib 版本: 3.5.3
8 =====
9 MKL 版本: 2021.1
10 CUDA 版本: 11.7
11 显卡 CUDA 版本: NVIDIA GeForce RTX 3060 Laptop GPU
12 Epoch 1/30: 100%|██████████| 21/21 [00:09<00:00, 2.
  25batch/s, loss=0.4562, acc=70.58%]
13 训练Epoch 1000000 83.04%
14 Epoch 01 | 损失: 0.5664 | 准确率: 70.58% | 验证率: 83.
  04%
15 Epoch 2/30: 100%|██████████| 21/21 [00:03<00:00, 6.
  60batch/s, loss=0.1797, acc=90.24%]
16 训练Epoch 2000000 89.47%
17 Epoch 02 | 损失: 0.2920 | 准确率: 90.24% | 验证率: 89.
  47%
18 Epoch 3/30: 100%|██████████| 21/21 [00:03<00:00, 6.
  89batch/s, loss=0.0605, acc=94.51%]
19 训练Epoch 3000000 94.15%
20 Epoch 03 | 损失: 0.1635 | 准确率: 94.51% | 验证率: 94.
  15%
21 Epoch 4/30: 100%|██████████| 21/21 [00:03<00:00, 6.
  81batch/s, loss=0.1300, acc=97.26%]
22 Epoch 04 | 损失: 0.0956 | 准确率: 97.26% | 验证率: 92.
  98%
23 Epoch 5/30: 100%|██████████| 21/21 [00:03<00:00, 6.
  67batch/s, loss=0.0443, acc=98.78%]
24 Epoch 6/30: 0%|          | 0/21 [00:00<?, ?batch/s]
  Epoch 05 | 损失: 0.0543 | 准确率: 98.78% | 验证率: 93.
  57%
25 Epoch 6/30: 100%|██████████| 21/21 [00:02<00:00, 7.
  10batch/s, loss=0.0818, acc=99.24%]
26 Epoch 06 | 损失: 0.0363 | 准确率: 99.24% | 验证率: 93.
  57%
27 Epoch 7/30: 100%|██████████| 21/21 [00:03<00:00, 6.
```

```

27 90batch/s, loss=0.0061, acc=99.70%]
28 000000Epoch 7000000 94.74%
29 Epoch 07 | 0000: 0.0227 | 00000: 99.70% | 00000: 94.
74%
30 Epoch 8/30: 100%|000000| 21/21 [00:03<00:00, 6.
85batch/s, loss=0.0215, acc=99.85%]
31 000000Epoch 8000000 95.32%
32 Epoch 08 | 0000: 0.0149 | 00000: 99.85% | 00000: 95.
32%
33 Epoch 9/30: 100%|000000| 21/21 [00:03<00:00, 6.
62batch/s, loss=0.0391, acc=99.85%]
34 Epoch 09 | 0000: 0.0158 | 00000: 99.85% | 00000: 93.
57%
35 Epoch 10/30: 100%|000000| 21/21 [00:02<00:00, 7.
15batch/s, loss=0.0060, acc=99.54%]
36 Epoch 10 | 0000: 0.0152 | 00000: 99.54% | 00000: 94.
15%
37 Epoch 11/30: 100%|000000| 21/21 [00:02<00:00, 7.
16batch/s, loss=0.0023, acc=99.85%]
38 Epoch 11 | 0000: 0.0107 | 00000: 99.85% | 00000: 94.
15%
39 Epoch 12/30: 100%|000000| 21/21 [00:03<00:00, 7.
00batch/s, loss=0.0016, acc=99.85%]
40 Epoch 12 | 0000: 0.0085 | 00000: 99.85% | 00000: 94.
15%
41 Epoch 13/30: 100%|000000| 21/21 [00:02<00:00, 7.
02batch/s, loss=0.3040, acc=98.48%]
42 Epoch 13 | 0000: 0.0338 | 00000: 98.48% | 00000: 94.
15%
43 Epoch 14/30: 100%|000000| 21/21 [00:03<00:00, 6.
88batch/s, loss=0.0124, acc=99.85%]
44 Epoch 14 | 0000: 0.0047 | 00000: 99.85% | 00000: 93.
57%
45 Epoch 15/30: 100%|000000| 21/21 [00:03<00:00, 6.
76batch/s, loss=0.0038, acc=99.54%]
46 Epoch 15 | 0000: 0.0135 | 00000: 99.54% | 00000: 91.
81%
47 Epoch 16/30: 100%|000000| 21/21 [00:03<00:00, 6.
89batch/s, loss=0.0404, acc=99.85%]
48 Epoch 16 | 0000: 0.0080 | 00000: 99.85% | 00000: 91.
81%

```

```

49 Epoch 17/30: 100%|██████████| 21/21 [00:02<00:00, 7.
    01batch/s, loss=0.0033, acc=100.00%]
50 Epoch 17 | 0000: 0.0040 | 000000: 100.00% | 000000: 94.
    15%
51 Epoch 18/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    77batch/s, loss=0.0021, acc=100.00%]
52 Epoch 19/30: 0%|          | 0/21 [00:00<?, ?batch/s
    ]Epoch 18 | 0000: 0.0066 | 000000: 100.00% | 000000: 94
    .74%
53 Epoch 19/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    84batch/s, loss=0.0012, acc=99.85%]
54 Epoch 19 | 0000: 0.0059 | 000000: 99.85% | 000000: 94.
    74%
55 Epoch 20/30: 100%|██████████| 21/21 [00:03<00:00, 5.
    55batch/s, loss=0.0007, acc=100.00%]
56 Epoch 20 | 0000: 0.0032 | 000000: 100.00% | 000000: 93.
    57%
57 Epoch 21/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    77batch/s, loss=0.0080, acc=100.00%]
58 Epoch 21 | 0000: 0.0032 | 000000: 100.00% | 000000: 93.
    57%
59 Epoch 22/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    52batch/s, loss=0.0032, acc=99.85%]
60 Epoch 22 | 0000: 0.0082 | 000000: 99.85% | 000000: 92.
    98%
61 Epoch 23/30: 100%|██████████| 21/21 [00:02<00:00, 7.
    22batch/s, loss=0.1644, acc=99.39%]
62 Epoch 23 | 0000: 0.0117 | 000000: 99.39% | 000000: 94.
    74%
63 Epoch 24/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    92batch/s, loss=0.0049, acc=100.00%]
64 Epoch 25/30: 0%|          | 0/21 [00:00<?, ?batch/s
    ]Epoch 24 | 0000: 0.0026 | 000000: 100.00% | 000000: 94
    .15%
65 Epoch 25/30: 100%|██████████| 21/21 [00:03<00:00, 6.
    97batch/s, loss=0.0067, acc=99.85%]
66 Epoch 25 | 0000: 0.0054 | 000000: 99.85% | 000000: 94.
    74%
67 Epoch 26/30: 100%|██████████| 21/21 [00:02<00:00, 7.
    17batch/s, loss=0.0016, acc=100.00%]
68 Epoch 27/30: 0%|          | 0/21 [00:00<?, ?batch/s

```

```
68 ]Epoch 26 | █████: 0.0035 | ██████: 100.00% | ██████:
    94.74%
69 Epoch 27/30: 100%|██████████| 21/21 [00:03<00:00, 6
    .68batch/s, loss=0.0016, acc=99.70%]
70 Epoch 27 | █████: 0.0101 | ██████: 99.70% | ██████: 93.
    57%
71 Epoch 28/30: 100%|██████████| 21/21 [00:03<00:00, 7
    .00batch/s, loss=0.0016, acc=99.85%]
72 Epoch 28 | █████: 0.0055 | ██████: 99.85% | ██████: 93.
    57%
73 Epoch 29/30: 100%|██████████| 21/21 [00:03<00:00, 6
    .96batch/s, loss=0.0020, acc=100.00%]
74 Epoch 29 | █████: 0.0054 | ██████: 100.00% | ██████: 93
    .57%
75 Epoch 30/30: 100%|██████████| 21/21 [00:02<00:00, 7
    .02batch/s, loss=0.0011, acc=100.00%]
76 Epoch 30 | █████: 0.0037 | ██████: 100.00% | ██████: 94
    .74%
77
78 ██████,██████0
79
```