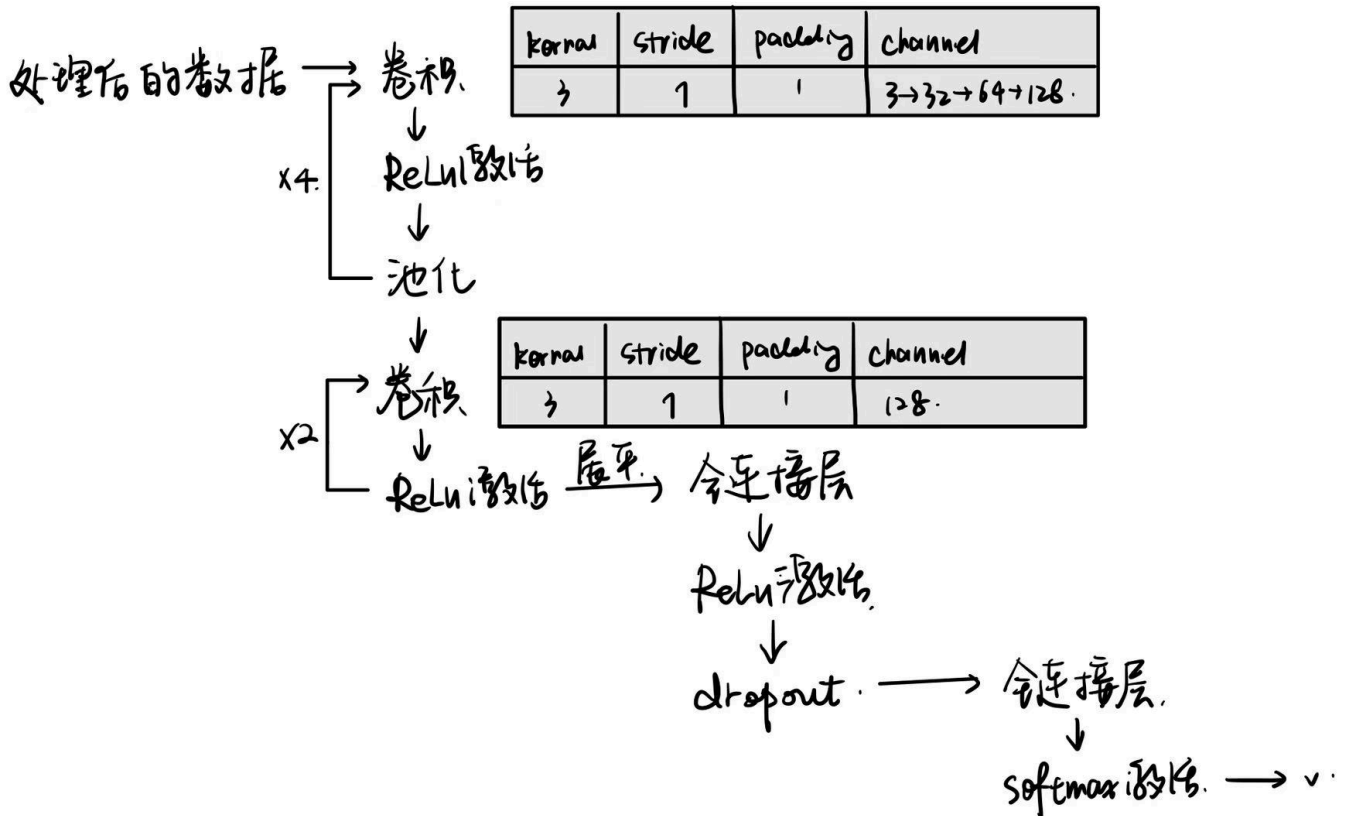


详细报告

网络结构的设计及其背后的理由



- 图片信息量大，故先使用卷积层充分提取信息，channel依次增大；
- 图片总体大小较小，故使用3*3卷积核；
- 池化层压缩数据量，提高训练速度；
- 随后采用两个全连接层反向传播，寻找最优参数；
- 采用dropout，减少过拟合。

我在训练过程中所做的任何修改或调整，以及这些修改如何影响模型的性能

- 发现训练数据的准确率比验证（测试）数据高约10%，故添加dropout层、正则化权重，增加数据增强的手段，模型的泛化能力稍有增强，准确率差减小；
- 模型的准确率在76%左右收敛，故增加卷积层，以提取更丰富的信息；
- 模型的准确率转而在79%左右收敛，故增加学习率调度，使得在60个epoch之后调整学习率为原来的0.1。

数据增强技术的使用及其对模型泛化能力的影响

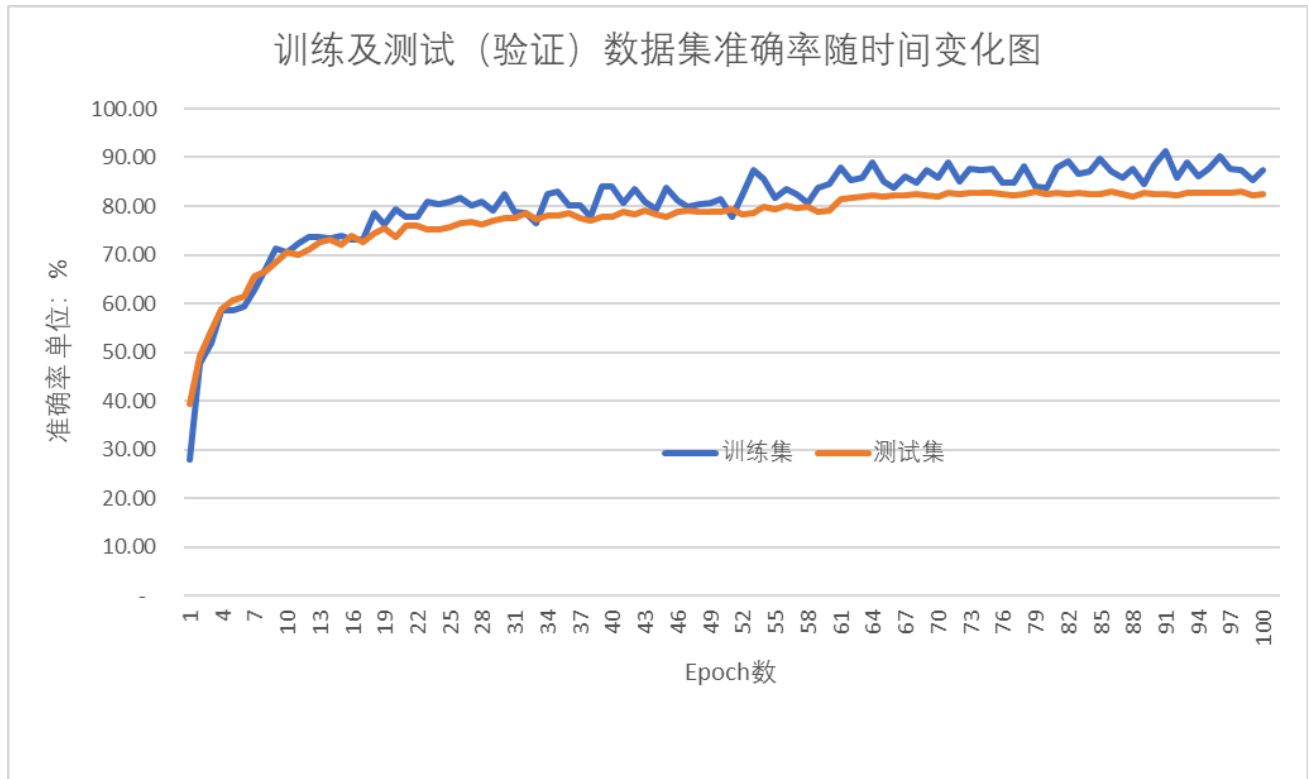
- 随机水平翻转、随机旋转 $\pm 15^\circ$ 、随机裁剪并填充、色彩扰动；
- 有数据增强相比没有数据增强，模型的泛化能力增强，训练集上的准确率与测试集（验证集）上的准确率差减小；
- 随着数据增强手段数量的增多，模型的泛化能力增强，训练集上的准确率与测试集（验证集）上的准确率差减小。

训练过程中遇到的任何挑战以及你是如何解决的

- 挑战：准确率始终过早收敛，且训练一次时间长，调参试错成本高；
- 解决：观察到收敛过早，猜测可能由于后期学习率过高导致始终无法下降到最低点，故采用学习率调度。

最终的模型性能评估，包括训练集和测试集的准确率

- 测试集最终准确率：82.4%
- 最后一组训练集的最终准确率：87.5%



Epoch [1/100], Step [100/782], Loss: 2.0053, Accuracy: 28.12%

Epoch [1/100], Step [200/782], Loss: 1.9745, Accuracy: 14.06%

Epoch [1/100], Step [300/782], Loss: 1.7976, Accuracy: 28.12%

Epoch [1/100], Step [400/782], Loss: 1.7510, Accuracy: 29.69%

Epoch [1/100], Step [500/782], Loss: 1.7922, Accuracy: 29.69%

Epoch [1/100], Step [600/782], Loss: 1.9069, Accuracy: 28.12%

Epoch [1/100], Step [700/782], Loss: 1.8015, Accuracy: 37.50%

Test Accuracy of the model on the 10000 test images: 39.3 %
Epoch [2/100], Step [100/782], Loss: 1.6341, Accuracy: 43.75%
Epoch [2/100], Step [200/782], Loss: 1.6331, Accuracy: 48.44%
Epoch [2/100], Step [300/782], Loss: 1.3425, Accuracy: 50.00%
Epoch [2/100], Step [400/782], Loss: 1.5801, Accuracy: 42.19%
Epoch [2/100], Step [500/782], Loss: 1.6544, Accuracy: 42.19%
Epoch [2/100], Step [600/782], Loss: 1.3041, Accuracy: 60.94%
Epoch [2/100], Step [700/782], Loss: 1.3973, Accuracy: 45.31%
Test Accuracy of the model on the 10000 test images: 49.19 %
Epoch [3/100], Step [100/782], Loss: 1.3455, Accuracy: 53.12%
Epoch [3/100], Step [200/782], Loss: 1.3820, Accuracy: 48.44%
Epoch [3/100], Step [300/782], Loss: 1.4800, Accuracy: 40.62%
Epoch [3/100], Step [400/782], Loss: 1.1319, Accuracy: 56.25%
Epoch [3/100], Step [500/782], Loss: 1.1106, Accuracy: 57.81%
Epoch [3/100], Step [600/782], Loss: 1.3027, Accuracy: 54.69%
Epoch [3/100], Step [700/782], Loss: 1.4687, Accuracy: 51.56%
Test Accuracy of the model on the 10000 test images: 54.53 %
Epoch [4/100], Step [100/782], Loss: 1.0776, Accuracy: 59.38%
Epoch [4/100], Step [200/782], Loss: 1.2156, Accuracy: 54.69%
Epoch [4/100], Step [300/782], Loss: 1.2818, Accuracy: 51.56%
Epoch [4/100], Step [400/782], Loss: 1.2936, Accuracy: 54.69%
Epoch [4/100], Step [500/782], Loss: 1.2260, Accuracy: 60.94%
Epoch [4/100], Step [600/782], Loss: 1.1596, Accuracy: 60.94%
Epoch [4/100], Step [700/782], Loss: 1.0295, Accuracy: 67.19%
Test Accuracy of the model on the 10000 test images: 58.81 %
Epoch [5/100], Step [100/782], Loss: 1.3947, Accuracy: 50.00%
Epoch [5/100], Step [200/782], Loss: 1.1031, Accuracy: 60.94%
Epoch [5/100], Step [300/782], Loss: 0.9948, Accuracy: 60.94%
Epoch [5/100], Step [400/782], Loss: 1.2723, Accuracy: 57.81%
Epoch [5/100], Step [500/782], Loss: 1.1779, Accuracy: 54.69%
Epoch [5/100], Step [600/782], Loss: 1.0120, Accuracy: 62.50%
Epoch [5/100], Step [700/782], Loss: 1.2118, Accuracy: 62.50%
Test Accuracy of the model on the 10000 test images: 60.64 %
Epoch [6/100], Step [100/782], Loss: 1.2827, Accuracy: 53.12%
Epoch [6/100], Step [200/782], Loss: 0.9564, Accuracy: 70.31%
Epoch [6/100], Step [300/782], Loss: 0.9819, Accuracy: 60.94%
Epoch [6/100], Step [400/782], Loss: 1.2504, Accuracy: 48.44%
Epoch [6/100], Step [500/782], Loss: 1.0149, Accuracy: 62.50%
Epoch [6/100], Step [600/782], Loss: 1.0573, Accuracy: 56.25%
Epoch [6/100], Step [700/782], Loss: 1.0231, Accuracy: 64.06%

Test Accuracy of the model on the 10000 test images: 61.35 %
Epoch [7/100], Step [100/782], Loss: 1.1220, Accuracy: 57.81%
Epoch [7/100], Step [200/782], Loss: 1.2877, Accuracy: 60.94%
Epoch [7/100], Step [300/782], Loss: 0.9763, Accuracy: 65.62%
Epoch [7/100], Step [400/782], Loss: 0.9294, Accuracy: 67.19%
Epoch [7/100], Step [500/782], Loss: 1.1971, Accuracy: 56.25%
Epoch [7/100], Step [600/782], Loss: 0.8255, Accuracy: 70.31%
Epoch [7/100], Step [700/782], Loss: 1.0379, Accuracy: 60.94%

Test Accuracy of the model on the 10000 test images: 65.54 %
Epoch [8/100], Step [100/782], Loss: 0.8255, Accuracy: 70.31%
Epoch [8/100], Step [200/782], Loss: 0.8495, Accuracy: 62.50%
Epoch [8/100], Step [300/782], Loss: 0.9800, Accuracy: 62.50%
Epoch [8/100], Step [400/782], Loss: 1.0032, Accuracy: 64.06%
Epoch [8/100], Step [500/782], Loss: 1.2743, Accuracy: 65.62%
Epoch [8/100], Step [600/782], Loss: 0.7374, Accuracy: 79.69%
Epoch [8/100], Step [700/782], Loss: 0.8384, Accuracy: 65.62%

Test Accuracy of the model on the 10000 test images: 66.65 %
Epoch [9/100], Step [100/782], Loss: 0.7472, Accuracy: 78.12%
Epoch [9/100], Step [200/782], Loss: 0.8308, Accuracy: 75.00%
Epoch [9/100], Step [300/782], Loss: 0.9075, Accuracy: 73.44%
Epoch [9/100], Step [400/782], Loss: 0.8540, Accuracy: 71.88%
Epoch [9/100], Step [500/782], Loss: 1.0608, Accuracy: 65.62%
Epoch [9/100], Step [600/782], Loss: 0.9557, Accuracy: 64.06%
Epoch [9/100], Step [700/782], Loss: 0.9212, Accuracy: 70.31%

Test Accuracy of the model on the 10000 test images: 68.39 %
Epoch [10/100], Step [100/782], Loss: 0.7401, Accuracy: 79.69%
Epoch [10/100], Step [200/782], Loss: 0.6442, Accuracy: 82.81%
Epoch [10/100], Step [300/782], Loss: 0.9105, Accuracy: 68.75%
Epoch [10/100], Step [400/782], Loss: 0.7519, Accuracy: 73.44%
Epoch [10/100], Step [500/782], Loss: 0.9272, Accuracy: 65.62%
Epoch [10/100], Step [600/782], Loss: 1.2559, Accuracy: 53.12%
Epoch [10/100], Step [700/782], Loss: 0.8268, Accuracy: 70.31%

Test Accuracy of the model on the 10000 test images: 70.53 %
Epoch [11/100], Step [100/782], Loss: 0.7608, Accuracy: 73.44%
Epoch [11/100], Step [200/782], Loss: 0.7604, Accuracy: 78.12%
Epoch [11/100], Step [300/782], Loss: 0.7567, Accuracy: 67.19%
Epoch [11/100], Step [400/782], Loss: 0.6353, Accuracy: 73.44%
Epoch [11/100], Step [500/782], Loss: 0.7400, Accuracy: 73.44%
Epoch [11/100], Step [600/782], Loss: 0.7118, Accuracy: 75.00%
Epoch [11/100], Step [700/782], Loss: 0.9212, Accuracy: 65.62%

Test Accuracy of the model on the 10000 test images: 70.0 %

Epoch [12/100], Step [100/782], Loss: 0.8003, Accuracy: 71.88%

Epoch [12/100], Step [200/782], Loss: 1.0750, Accuracy: 64.06%

Epoch [12/100], Step [300/782], Loss: 0.6719, Accuracy: 73.44%

Epoch [12/100], Step [400/782], Loss: 0.5734, Accuracy: 79.69%

Epoch [12/100], Step [500/782], Loss: 0.8606, Accuracy: 68.75%

Epoch [12/100], Step [600/782], Loss: 0.7321, Accuracy: 76.56%

Epoch [12/100], Step [700/782], Loss: 0.6974, Accuracy: 81.25%

Test Accuracy of the model on the 10000 test images: 71.15 %

Epoch [13/100], Step [100/782], Loss: 0.8500, Accuracy: 68.75%

Epoch [13/100], Step [200/782], Loss: 0.9366, Accuracy: 76.56%

Epoch [13/100], Step [300/782], Loss: 0.7078, Accuracy: 79.69%

Epoch [13/100], Step [400/782], Loss: 0.5940, Accuracy: 76.56%

Epoch [13/100], Step [500/782], Loss: 0.6981, Accuracy: 79.69%

Epoch [13/100], Step [600/782], Loss: 0.7851, Accuracy: 68.75%

Epoch [13/100], Step [700/782], Loss: 0.8293, Accuracy: 65.62%

Test Accuracy of the model on the 10000 test images: 72.49 %

Epoch [14/100], Step [100/782], Loss: 0.7415, Accuracy: 71.88%

Epoch [14/100], Step [200/782], Loss: 0.6822, Accuracy: 76.56%

Epoch [14/100], Step [300/782], Loss: 0.6398, Accuracy: 78.12%

Epoch [14/100], Step [400/782], Loss: 0.8312, Accuracy: 73.44%

Epoch [14/100], Step [500/782], Loss: 0.9377, Accuracy: 65.62%

Epoch [14/100], Step [600/782], Loss: 0.6957, Accuracy: 71.88%

Epoch [14/100], Step [700/782], Loss: 0.6461, Accuracy: 76.56%

Test Accuracy of the model on the 10000 test images: 73.25 %

Epoch [15/100], Step [100/782], Loss: 0.8881, Accuracy: 70.31%

Epoch [15/100], Step [200/782], Loss: 0.9722, Accuracy: 65.62%

Epoch [15/100], Step [300/782], Loss: 0.8563, Accuracy: 75.00%

Epoch [15/100], Step [400/782], Loss: 0.8288, Accuracy: 78.12%

Epoch [15/100], Step [500/782], Loss: 0.7226, Accuracy: 79.69%

Epoch [15/100], Step [600/782], Loss: 0.7563, Accuracy: 71.88%

Epoch [15/100], Step [700/782], Loss: 0.7142, Accuracy: 76.56%

Test Accuracy of the model on the 10000 test images: 72.06 %

Epoch [16/100], Step [100/782], Loss: 0.8202, Accuracy: 76.56%

Epoch [16/100], Step [200/782], Loss: 1.0486, Accuracy: 64.06%

Epoch [16/100], Step [300/782], Loss: 0.6550, Accuracy: 78.12%

Epoch [16/100], Step [400/782], Loss: 0.8885, Accuracy: 78.12%

Epoch [16/100], Step [500/782], Loss: 0.6586, Accuracy: 71.88%

Epoch [16/100], Step [600/782], Loss: 0.7565, Accuracy: 70.31%

Epoch [16/100], Step [700/782], Loss: 0.7276, Accuracy: 73.44%

Test Accuracy of the model on the 10000 test images: 73.96 %
Epoch [17/100], Step [100/782], Loss: 0.6766, Accuracy: 78.12%
Epoch [17/100], Step [200/782], Loss: 0.6225, Accuracy: 73.44%
Epoch [17/100], Step [300/782], Loss: 0.8804, Accuracy: 62.50%
Epoch [17/100], Step [400/782], Loss: 0.8275, Accuracy: 70.31%
Epoch [17/100], Step [500/782], Loss: 0.7220, Accuracy: 75.00%
Epoch [17/100], Step [600/782], Loss: 0.7282, Accuracy: 73.44%
Epoch [17/100], Step [700/782], Loss: 0.5704, Accuracy: 79.69%
Test Accuracy of the model on the 10000 test images: 72.57 %
Epoch [18/100], Step [100/782], Loss: 0.5841, Accuracy: 79.69%
Epoch [18/100], Step [200/782], Loss: 0.6578, Accuracy: 76.56%
Epoch [18/100], Step [300/782], Loss: 0.6329, Accuracy: 73.44%
Epoch [18/100], Step [400/782], Loss: 0.5690, Accuracy: 82.81%
Epoch [18/100], Step [500/782], Loss: 0.8654, Accuracy: 73.44%
Epoch [18/100], Step [600/782], Loss: 0.5712, Accuracy: 84.38%
Epoch [18/100], Step [700/782], Loss: 0.5726, Accuracy: 79.69%
Test Accuracy of the model on the 10000 test images: 74.54 %
Epoch [19/100], Step [100/782], Loss: 0.5618, Accuracy: 73.44%
Epoch [19/100], Step [200/782], Loss: 0.6956, Accuracy: 76.56%
Epoch [19/100], Step [300/782], Loss: 0.6401, Accuracy: 76.56%
Epoch [19/100], Step [400/782], Loss: 0.5923, Accuracy: 79.69%
Epoch [19/100], Step [500/782], Loss: 0.5375, Accuracy: 82.81%
Epoch [19/100], Step [600/782], Loss: 1.1983, Accuracy: 62.50%
Epoch [19/100], Step [700/782], Loss: 0.5865, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 75.47 %
Epoch [20/100], Step [100/782], Loss: 0.4932, Accuracy: 87.50%
Epoch [20/100], Step [200/782], Loss: 0.5143, Accuracy: 84.38%
Epoch [20/100], Step [300/782], Loss: 0.5708, Accuracy: 81.25%
Epoch [20/100], Step [400/782], Loss: 0.8789, Accuracy: 73.44%
Epoch [20/100], Step [500/782], Loss: 0.7607, Accuracy: 73.44%
Epoch [20/100], Step [600/782], Loss: 0.6837, Accuracy: 76.56%
Epoch [20/100], Step [700/782], Loss: 0.5826, Accuracy: 78.12%
Test Accuracy of the model on the 10000 test images: 73.7 %
Epoch [21/100], Step [100/782], Loss: 0.7171, Accuracy: 78.12%
Epoch [21/100], Step [200/782], Loss: 0.6124, Accuracy: 76.56%
Epoch [21/100], Step [300/782], Loss: 0.7422, Accuracy: 78.12%
Epoch [21/100], Step [400/782], Loss: 0.8956, Accuracy: 76.56%
Epoch [21/100], Step [500/782], Loss: 0.6916, Accuracy: 79.69%
Epoch [21/100], Step [600/782], Loss: 0.6946, Accuracy: 76.56%
Epoch [21/100], Step [700/782], Loss: 0.7147, Accuracy: 78.12%

Test Accuracy of the model on the 10000 test images: 75.97 %
Epoch [22/100], Step [100/782], Loss: 0.6043, Accuracy: 76.56%
Epoch [22/100], Step [200/782], Loss: 0.5549, Accuracy: 81.25%
Epoch [22/100], Step [300/782], Loss: 0.6993, Accuracy: 79.69%
Epoch [22/100], Step [400/782], Loss: 0.5232, Accuracy: 81.25%
Epoch [22/100], Step [500/782], Loss: 0.9145, Accuracy: 70.31%
Epoch [22/100], Step [600/782], Loss: 0.6282, Accuracy: 76.56%
Epoch [22/100], Step [700/782], Loss: 0.5281, Accuracy: 78.12%
Test Accuracy of the model on the 10000 test images: 75.97 %
Epoch [23/100], Step [100/782], Loss: 0.5051, Accuracy: 81.25%
Epoch [23/100], Step [200/782], Loss: 0.7528, Accuracy: 71.88%
Epoch [23/100], Step [300/782], Loss: 0.4961, Accuracy: 84.38%
Epoch [23/100], Step [400/782], Loss: 0.5859, Accuracy: 82.81%
Epoch [23/100], Step [500/782], Loss: 0.6363, Accuracy: 79.69%
Epoch [23/100], Step [600/782], Loss: 0.5296, Accuracy: 85.94%
Epoch [23/100], Step [700/782], Loss: 0.5444, Accuracy: 81.25%
Test Accuracy of the model on the 10000 test images: 75.25 %
Epoch [24/100], Step [100/782], Loss: 0.7471, Accuracy: 78.12%
Epoch [24/100], Step [200/782], Loss: 0.4389, Accuracy: 85.94%
Epoch [24/100], Step [300/782], Loss: 0.6383, Accuracy: 75.00%
Epoch [24/100], Step [400/782], Loss: 0.6066, Accuracy: 78.12%
Epoch [24/100], Step [500/782], Loss: 0.7795, Accuracy: 76.56%
Epoch [24/100], Step [600/782], Loss: 0.5778, Accuracy: 79.69%
Epoch [24/100], Step [700/782], Loss: 0.3330, Accuracy: 89.06%
Test Accuracy of the model on the 10000 test images: 75.23 %
Epoch [25/100], Step [100/782], Loss: 0.6379, Accuracy: 79.69%
Epoch [25/100], Step [200/782], Loss: 0.5259, Accuracy: 78.12%
Epoch [25/100], Step [300/782], Loss: 0.5710, Accuracy: 81.25%
Epoch [25/100], Step [400/782], Loss: 0.7008, Accuracy: 75.00%
Epoch [25/100], Step [500/782], Loss: 0.6589, Accuracy: 79.69%
Epoch [25/100], Step [600/782], Loss: 0.4475, Accuracy: 85.94%
Epoch [25/100], Step [700/782], Loss: 0.4756, Accuracy: 85.94%
Test Accuracy of the model on the 10000 test images: 75.66 %
Epoch [26/100], Step [100/782], Loss: 0.5140, Accuracy: 82.81%
Epoch [26/100], Step [200/782], Loss: 0.7197, Accuracy: 75.00%
Epoch [26/100], Step [300/782], Loss: 0.5891, Accuracy: 78.12%
Epoch [26/100], Step [400/782], Loss: 0.5671, Accuracy: 82.81%
Epoch [26/100], Step [500/782], Loss: 0.5695, Accuracy: 81.25%
Epoch [26/100], Step [600/782], Loss: 0.4073, Accuracy: 89.06%
Epoch [26/100], Step [700/782], Loss: 0.7198, Accuracy: 82.81%

Test Accuracy of the model on the 10000 test images: 76.62 %
Epoch [27/100], Step [100/782], Loss: 0.5344, Accuracy: 81.25%
Epoch [27/100], Step [200/782], Loss: 0.6086, Accuracy: 78.12%
Epoch [27/100], Step [300/782], Loss: 0.5765, Accuracy: 87.50%
Epoch [27/100], Step [400/782], Loss: 0.5692, Accuracy: 78.12%
Epoch [27/100], Step [500/782], Loss: 0.6192, Accuracy: 76.56%
Epoch [27/100], Step [600/782], Loss: 0.5336, Accuracy: 75.00%
Epoch [27/100], Step [700/782], Loss: 0.5776, Accuracy: 84.38%
Test Accuracy of the model on the 10000 test images: 76.86 %
Epoch [28/100], Step [100/782], Loss: 0.6462, Accuracy: 78.12%
Epoch [28/100], Step [200/782], Loss: 0.7721, Accuracy: 75.00%
Epoch [28/100], Step [300/782], Loss: 0.5267, Accuracy: 85.94%
Epoch [28/100], Step [400/782], Loss: 0.4761, Accuracy: 84.38%
Epoch [28/100], Step [500/782], Loss: 0.3820, Accuracy: 89.06%
Epoch [28/100], Step [600/782], Loss: 0.5412, Accuracy: 76.56%
Epoch [28/100], Step [700/782], Loss: 0.7739, Accuracy: 78.12%
Test Accuracy of the model on the 10000 test images: 76.35 %
Epoch [29/100], Step [100/782], Loss: 0.4237, Accuracy: 85.94%
Epoch [29/100], Step [200/782], Loss: 0.5166, Accuracy: 82.81%
Epoch [29/100], Step [300/782], Loss: 0.6007, Accuracy: 78.12%
Epoch [29/100], Step [400/782], Loss: 0.8110, Accuracy: 81.25%
Epoch [29/100], Step [500/782], Loss: 0.4863, Accuracy: 81.25%
Epoch [29/100], Step [600/782], Loss: 0.7626, Accuracy: 67.19%
Epoch [29/100], Step [700/782], Loss: 0.8462, Accuracy: 76.56%
Test Accuracy of the model on the 10000 test images: 77.01 %
Epoch [30/100], Step [100/782], Loss: 0.5496, Accuracy: 82.81%
Epoch [30/100], Step [200/782], Loss: 0.8312, Accuracy: 78.12%
Epoch [30/100], Step [300/782], Loss: 0.5367, Accuracy: 84.38%
Epoch [30/100], Step [400/782], Loss: 0.5907, Accuracy: 82.81%
Epoch [30/100], Step [500/782], Loss: 0.3948, Accuracy: 82.81%
Epoch [30/100], Step [600/782], Loss: 0.5134, Accuracy: 79.69%
Epoch [30/100], Step [700/782], Loss: 0.4182, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 77.6 %
Epoch [31/100], Step [100/782], Loss: 0.6313, Accuracy: 73.44%
Epoch [31/100], Step [200/782], Loss: 0.6040, Accuracy: 82.81%
Epoch [31/100], Step [300/782], Loss: 0.4653, Accuracy: 81.25%
Epoch [31/100], Step [400/782], Loss: 0.8110, Accuracy: 68.75%
Epoch [31/100], Step [500/782], Loss: 0.6279, Accuracy: 79.69%
Epoch [31/100], Step [600/782], Loss: 0.3509, Accuracy: 85.94%
Epoch [31/100], Step [700/782], Loss: 0.6076, Accuracy: 79.69%

Test Accuracy of the model on the 10000 test images: 77.57 %

Epoch [32/100], Step [100/782], Loss: 0.9387, Accuracy: 71.88%

Epoch [32/100], Step [200/782], Loss: 0.5438, Accuracy: 82.81%

Epoch [32/100], Step [300/782], Loss: 0.6627, Accuracy: 76.56%

Epoch [32/100], Step [400/782], Loss: 0.7886, Accuracy: 76.56%

Epoch [32/100], Step [500/782], Loss: 0.3416, Accuracy: 90.62%

Epoch [32/100], Step [600/782], Loss: 0.6126, Accuracy: 82.81%

Epoch [32/100], Step [700/782], Loss: 0.8866, Accuracy: 68.75%

Test Accuracy of the model on the 10000 test images: 78.46 %

Epoch [33/100], Step [100/782], Loss: 0.7061, Accuracy: 70.31%

Epoch [33/100], Step [200/782], Loss: 0.4536, Accuracy: 85.94%

Epoch [33/100], Step [300/782], Loss: 0.9003, Accuracy: 73.44%

Epoch [33/100], Step [400/782], Loss: 0.5990, Accuracy: 76.56%

Epoch [33/100], Step [500/782], Loss: 0.6089, Accuracy: 78.12%

Epoch [33/100], Step [600/782], Loss: 0.6710, Accuracy: 78.12%

Epoch [33/100], Step [700/782], Loss: 0.8366, Accuracy: 73.44%

Test Accuracy of the model on the 10000 test images: 77.2 %

Epoch [34/100], Step [100/782], Loss: 0.6038, Accuracy: 82.81%

Epoch [34/100], Step [200/782], Loss: 0.6065, Accuracy: 79.69%

Epoch [34/100], Step [300/782], Loss: 0.5801, Accuracy: 84.38%

Epoch [34/100], Step [400/782], Loss: 0.7025, Accuracy: 79.69%

Epoch [34/100], Step [500/782], Loss: 0.3952, Accuracy: 89.06%

Epoch [34/100], Step [600/782], Loss: 0.5493, Accuracy: 78.12%

Epoch [34/100], Step [700/782], Loss: 0.4556, Accuracy: 82.81%

Test Accuracy of the model on the 10000 test images: 78.14 %

Epoch [35/100], Step [100/782], Loss: 0.5819, Accuracy: 79.69%

Epoch [35/100], Step [200/782], Loss: 0.6845, Accuracy: 76.56%

Epoch [35/100], Step [300/782], Loss: 0.4966, Accuracy: 89.06%

Epoch [35/100], Step [400/782], Loss: 0.4579, Accuracy: 82.81%

Epoch [35/100], Step [500/782], Loss: 0.4507, Accuracy: 85.94%

Epoch [35/100], Step [600/782], Loss: 0.5383, Accuracy: 79.69%

Epoch [35/100], Step [700/782], Loss: 0.4893, Accuracy: 87.50%

Test Accuracy of the model on the 10000 test images: 78.0 %

Epoch [36/100], Step [100/782], Loss: 0.3588, Accuracy: 85.94%

Epoch [36/100], Step [200/782], Loss: 0.5040, Accuracy: 82.81%

Epoch [36/100], Step [300/782], Loss: 0.7111, Accuracy: 78.12%

Epoch [36/100], Step [400/782], Loss: 0.5166, Accuracy: 85.94%

Epoch [36/100], Step [500/782], Loss: 0.6875, Accuracy: 79.69%

Epoch [36/100], Step [600/782], Loss: 0.8939, Accuracy: 64.06%

Epoch [36/100], Step [700/782], Loss: 0.4743, Accuracy: 84.38%

Test Accuracy of the model on the 10000 test images: 78.66 %
Epoch [37/100], Step [100/782], Loss: 0.5357, Accuracy: 81.25%
Epoch [37/100], Step [200/782], Loss: 0.4995, Accuracy: 81.25%
Epoch [37/100], Step [300/782], Loss: 0.5752, Accuracy: 76.56%
Epoch [37/100], Step [400/782], Loss: 0.5048, Accuracy: 82.81%
Epoch [37/100], Step [500/782], Loss: 0.3961, Accuracy: 85.94%
Epoch [37/100], Step [600/782], Loss: 0.5075, Accuracy: 78.12%
Epoch [37/100], Step [700/782], Loss: 0.5607, Accuracy: 75.00%
Test Accuracy of the model on the 10000 test images: 77.62 %
Epoch [38/100], Step [100/782], Loss: 0.6188, Accuracy: 81.25%
Epoch [38/100], Step [200/782], Loss: 0.7961, Accuracy: 71.88%
Epoch [38/100], Step [300/782], Loss: 0.8915, Accuracy: 71.88%
Epoch [38/100], Step [400/782], Loss: 0.7455, Accuracy: 75.00%
Epoch [38/100], Step [500/782], Loss: 0.6724, Accuracy: 78.12%
Epoch [38/100], Step [600/782], Loss: 0.4949, Accuracy: 82.81%
Epoch [38/100], Step [700/782], Loss: 0.4668, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 77.12 %
Epoch [39/100], Step [100/782], Loss: 0.2002, Accuracy: 95.31%
Epoch [39/100], Step [200/782], Loss: 0.3936, Accuracy: 85.94%
Epoch [39/100], Step [300/782], Loss: 0.4814, Accuracy: 82.81%
Epoch [39/100], Step [400/782], Loss: 0.4952, Accuracy: 82.81%
Epoch [39/100], Step [500/782], Loss: 0.7018, Accuracy: 75.00%
Epoch [39/100], Step [600/782], Loss: 0.5850, Accuracy: 82.81%
Epoch [39/100], Step [700/782], Loss: 0.5655, Accuracy: 84.38%
Test Accuracy of the model on the 10000 test images: 77.91 %
Epoch [40/100], Step [100/782], Loss: 0.3714, Accuracy: 90.62%
Epoch [40/100], Step [200/782], Loss: 0.4466, Accuracy: 85.94%
Epoch [40/100], Step [300/782], Loss: 0.3176, Accuracy: 90.62%
Epoch [40/100], Step [400/782], Loss: 0.4318, Accuracy: 85.94%
Epoch [40/100], Step [500/782], Loss: 0.6504, Accuracy: 75.00%
Epoch [40/100], Step [600/782], Loss: 0.5085, Accuracy: 81.25%
Epoch [40/100], Step [700/782], Loss: 0.6696, Accuracy: 79.69%
Test Accuracy of the model on the 10000 test images: 77.88 %
Epoch [41/100], Step [100/782], Loss: 0.7578, Accuracy: 70.31%
Epoch [41/100], Step [200/782], Loss: 0.6888, Accuracy: 79.69%
Epoch [41/100], Step [300/782], Loss: 0.3608, Accuracy: 84.38%
Epoch [41/100], Step [400/782], Loss: 0.5633, Accuracy: 78.12%
Epoch [41/100], Step [500/782], Loss: 0.3211, Accuracy: 89.06%
Epoch [41/100], Step [600/782], Loss: 0.6023, Accuracy: 75.00%
Epoch [41/100], Step [700/782], Loss: 0.3027, Accuracy: 87.50%

Test Accuracy of the model on the 10000 test images: 78.9 %

Epoch [42/100], Step [100/782], Loss: 0.4382, Accuracy: 87.50%

Epoch [42/100], Step [200/782], Loss: 0.7444, Accuracy: 76.56%

Epoch [42/100], Step [300/782], Loss: 0.5235, Accuracy: 82.81%

Epoch [42/100], Step [400/782], Loss: 0.5113, Accuracy: 85.94%

Epoch [42/100], Step [500/782], Loss: 0.5419, Accuracy: 82.81%

Epoch [42/100], Step [600/782], Loss: 0.4775, Accuracy: 81.25%

Epoch [42/100], Step [700/782], Loss: 0.3787, Accuracy: 87.50%

Test Accuracy of the model on the 10000 test images: 78.39 %

Epoch [43/100], Step [100/782], Loss: 0.7948, Accuracy: 79.69%

Epoch [43/100], Step [200/782], Loss: 0.5535, Accuracy: 85.94%

Epoch [43/100], Step [300/782], Loss: 0.5895, Accuracy: 78.12%

Epoch [43/100], Step [400/782], Loss: 0.7486, Accuracy: 73.44%

Epoch [43/100], Step [500/782], Loss: 0.6302, Accuracy: 79.69%

Epoch [43/100], Step [600/782], Loss: 0.4380, Accuracy: 87.50%

Epoch [43/100], Step [700/782], Loss: 0.5633, Accuracy: 82.81%

Test Accuracy of the model on the 10000 test images: 79.04 %

Epoch [44/100], Step [100/782], Loss: 0.4676, Accuracy: 85.94%

Epoch [44/100], Step [200/782], Loss: 0.9071, Accuracy: 65.62%

Epoch [44/100], Step [300/782], Loss: 0.6468, Accuracy: 75.00%

Epoch [44/100], Step [400/782], Loss: 0.5600, Accuracy: 79.69%

Epoch [44/100], Step [500/782], Loss: 0.4245, Accuracy: 82.81%

Epoch [44/100], Step [600/782], Loss: 0.4180, Accuracy: 85.94%

Epoch [44/100], Step [700/782], Loss: 0.4518, Accuracy: 81.25%

Test Accuracy of the model on the 10000 test images: 78.36 %

Epoch [45/100], Step [100/782], Loss: 0.5806, Accuracy: 76.56%

Epoch [45/100], Step [200/782], Loss: 0.4273, Accuracy: 84.38%

Epoch [45/100], Step [300/782], Loss: 0.6264, Accuracy: 76.56%

Epoch [45/100], Step [400/782], Loss: 0.4150, Accuracy: 84.38%

Epoch [45/100], Step [500/782], Loss: 0.5365, Accuracy: 87.50%

Epoch [45/100], Step [600/782], Loss: 0.3578, Accuracy: 87.50%

Epoch [45/100], Step [700/782], Loss: 0.3720, Accuracy: 89.06%

Test Accuracy of the model on the 10000 test images: 77.83 %

Epoch [46/100], Step [100/782], Loss: 0.4740, Accuracy: 78.12%

Epoch [46/100], Step [200/782], Loss: 0.4887, Accuracy: 81.25%

Epoch [46/100], Step [300/782], Loss: 0.4424, Accuracy: 84.38%

Epoch [46/100], Step [400/782], Loss: 0.5704, Accuracy: 78.12%

Epoch [46/100], Step [500/782], Loss: 0.6358, Accuracy: 78.12%

Epoch [46/100], Step [600/782], Loss: 0.3273, Accuracy: 89.06%

Epoch [46/100], Step [700/782], Loss: 0.5871, Accuracy: 79.69%

Test Accuracy of the model on the 10000 test images: 78.9 %

Epoch [47/100], Step [100/782], Loss: 0.5540, Accuracy: 78.12%

Epoch [47/100], Step [200/782], Loss: 0.6223, Accuracy: 79.69%

Epoch [47/100], Step [300/782], Loss: 0.5118, Accuracy: 82.81%

Epoch [47/100], Step [400/782], Loss: 0.6050, Accuracy: 76.56%

Epoch [47/100], Step [500/782], Loss: 0.4398, Accuracy: 79.69%

Epoch [47/100], Step [600/782], Loss: 0.5489, Accuracy: 81.25%

Epoch [47/100], Step [700/782], Loss: 0.5099, Accuracy: 81.25%

Test Accuracy of the model on the 10000 test images: 79.0 %

Epoch [48/100], Step [100/782], Loss: 0.5261, Accuracy: 82.81%

Epoch [48/100], Step [200/782], Loss: 0.5001, Accuracy: 84.38%

Epoch [48/100], Step [300/782], Loss: 0.5437, Accuracy: 79.69%

Epoch [48/100], Step [400/782], Loss: 0.7677, Accuracy: 75.00%

Epoch [48/100], Step [500/782], Loss: 0.6489, Accuracy: 79.69%

Epoch [48/100], Step [600/782], Loss: 0.6839, Accuracy: 78.12%

Epoch [48/100], Step [700/782], Loss: 0.6508, Accuracy: 82.81%

Test Accuracy of the model on the 10000 test images: 78.76 %

Epoch [49/100], Step [100/782], Loss: 0.5891, Accuracy: 78.12%

Epoch [49/100], Step [200/782], Loss: 0.5440, Accuracy: 82.81%

Epoch [49/100], Step [300/782], Loss: 0.6451, Accuracy: 82.81%

Epoch [49/100], Step [400/782], Loss: 0.5567, Accuracy: 81.25%

Epoch [49/100], Step [500/782], Loss: 0.7963, Accuracy: 68.75%

Epoch [49/100], Step [600/782], Loss: 0.3375, Accuracy: 92.19%

Epoch [49/100], Step [700/782], Loss: 0.5329, Accuracy: 78.12%

Test Accuracy of the model on the 10000 test images: 78.8 %

Epoch [50/100], Step [100/782], Loss: 0.5578, Accuracy: 84.38%

Epoch [50/100], Step [200/782], Loss: 0.4500, Accuracy: 78.12%

Epoch [50/100], Step [300/782], Loss: 0.6737, Accuracy: 76.56%

Epoch [50/100], Step [400/782], Loss: 0.4456, Accuracy: 84.38%

Epoch [50/100], Step [500/782], Loss: 0.4968, Accuracy: 79.69%

Epoch [50/100], Step [600/782], Loss: 0.5650, Accuracy: 76.56%

Epoch [50/100], Step [700/782], Loss: 0.3211, Accuracy: 90.62%

Test Accuracy of the model on the 10000 test images: 78.86 %

Epoch [51/100], Step [100/782], Loss: 0.6003, Accuracy: 76.56%

Epoch [51/100], Step [200/782], Loss: 0.4226, Accuracy: 87.50%

Epoch [51/100], Step [300/782], Loss: 0.8425, Accuracy: 71.88%

Epoch [51/100], Step [400/782], Loss: 0.5292, Accuracy: 78.12%

Epoch [51/100], Step [500/782], Loss: 0.6395, Accuracy: 71.88%

Epoch [51/100], Step [600/782], Loss: 0.5732, Accuracy: 78.12%

Epoch [51/100], Step [700/782], Loss: 0.7783, Accuracy: 81.25%

Test Accuracy of the model on the 10000 test images: 79.37 %
Epoch [52/100], Step [100/782], Loss: 0.5135, Accuracy: 81.25%
Epoch [52/100], Step [200/782], Loss: 0.5483, Accuracy: 81.25%
Epoch [52/100], Step [300/782], Loss: 0.4952, Accuracy: 82.81%
Epoch [52/100], Step [400/782], Loss: 0.3853, Accuracy: 87.50%
Epoch [52/100], Step [500/782], Loss: 0.6123, Accuracy: 81.25%
Epoch [52/100], Step [600/782], Loss: 0.4979, Accuracy: 79.69%
Epoch [52/100], Step [700/782], Loss: 0.4890, Accuracy: 81.25%
Test Accuracy of the model on the 10000 test images: 78.38 %
Epoch [53/100], Step [100/782], Loss: 0.5687, Accuracy: 85.94%
Epoch [53/100], Step [200/782], Loss: 0.4959, Accuracy: 84.38%
Epoch [53/100], Step [300/782], Loss: 0.4425, Accuracy: 87.50%
Epoch [53/100], Step [400/782], Loss: 0.4854, Accuracy: 87.50%
Epoch [53/100], Step [500/782], Loss: 0.3912, Accuracy: 90.62%
Epoch [53/100], Step [600/782], Loss: 0.5932, Accuracy: 81.25%
Epoch [53/100], Step [700/782], Loss: 0.2155, Accuracy: 93.75%
Test Accuracy of the model on the 10000 test images: 78.66 %
Epoch [54/100], Step [100/782], Loss: 0.3185, Accuracy: 85.94%
Epoch [54/100], Step [200/782], Loss: 0.2580, Accuracy: 95.31%
Epoch [54/100], Step [300/782], Loss: 0.4771, Accuracy: 85.94%
Epoch [54/100], Step [400/782], Loss: 0.7299, Accuracy: 75.00%
Epoch [54/100], Step [500/782], Loss: 0.3137, Accuracy: 90.62%
Epoch [54/100], Step [600/782], Loss: 0.4625, Accuracy: 85.94%
Epoch [54/100], Step [700/782], Loss: 0.6269, Accuracy: 81.25%
Test Accuracy of the model on the 10000 test images: 79.95 %
Epoch [55/100], Step [100/782], Loss: 0.5552, Accuracy: 79.69%
Epoch [55/100], Step [200/782], Loss: 0.6478, Accuracy: 82.81%
Epoch [55/100], Step [300/782], Loss: 0.6458, Accuracy: 78.12%
Epoch [55/100], Step [400/782], Loss: 0.4207, Accuracy: 89.06%
Epoch [55/100], Step [500/782], Loss: 0.6464, Accuracy: 84.38%
Epoch [55/100], Step [600/782], Loss: 0.4986, Accuracy: 79.69%
Epoch [55/100], Step [700/782], Loss: 0.5900, Accuracy: 78.12%
Test Accuracy of the model on the 10000 test images: 79.31 %
Epoch [56/100], Step [100/782], Loss: 0.3704, Accuracy: 87.50%
Epoch [56/100], Step [200/782], Loss: 0.3705, Accuracy: 85.94%
Epoch [56/100], Step [300/782], Loss: 0.5759, Accuracy: 78.12%
Epoch [56/100], Step [400/782], Loss: 0.6392, Accuracy: 82.81%
Epoch [56/100], Step [500/782], Loss: 0.6407, Accuracy: 78.12%
Epoch [56/100], Step [600/782], Loss: 0.3908, Accuracy: 85.94%
Epoch [56/100], Step [700/782], Loss: 0.5363, Accuracy: 85.94%

Test Accuracy of the model on the 10000 test images: 80.26 %
Epoch [57/100], Step [100/782], Loss: 0.3556, Accuracy: 81.25%
Epoch [57/100], Step [200/782], Loss: 0.5951, Accuracy: 76.56%
Epoch [57/100], Step [300/782], Loss: 0.5280, Accuracy: 79.69%
Epoch [57/100], Step [400/782], Loss: 0.5046, Accuracy: 84.38%
Epoch [57/100], Step [500/782], Loss: 0.4211, Accuracy: 84.38%
Epoch [57/100], Step [600/782], Loss: 0.3299, Accuracy: 85.94%
Epoch [57/100], Step [700/782], Loss: 0.4536, Accuracy: 84.38%
Test Accuracy of the model on the 10000 test images: 79.53 %
Epoch [58/100], Step [100/782], Loss: 0.5445, Accuracy: 87.50%
Epoch [58/100], Step [200/782], Loss: 0.5290, Accuracy: 84.38%
Epoch [58/100], Step [300/782], Loss: 0.6029, Accuracy: 78.12%
Epoch [58/100], Step [400/782], Loss: 0.6846, Accuracy: 73.44%
Epoch [58/100], Step [500/782], Loss: 0.4423, Accuracy: 81.25%
Epoch [58/100], Step [600/782], Loss: 0.4299, Accuracy: 82.81%
Epoch [58/100], Step [700/782], Loss: 0.5902, Accuracy: 76.56%
Test Accuracy of the model on the 10000 test images: 79.97 %
Epoch [59/100], Step [100/782], Loss: 0.5246, Accuracy: 76.56%
Epoch [59/100], Step [200/782], Loss: 0.2552, Accuracy: 92.19%
Epoch [59/100], Step [300/782], Loss: 0.5505, Accuracy: 82.81%
Epoch [59/100], Step [400/782], Loss: 0.5713, Accuracy: 82.81%
Epoch [59/100], Step [500/782], Loss: 0.4442, Accuracy: 85.94%
Epoch [59/100], Step [600/782], Loss: 0.5123, Accuracy: 79.69%
Epoch [59/100], Step [700/782], Loss: 0.4066, Accuracy: 85.94%
Test Accuracy of the model on the 10000 test images: 78.83 %
Epoch [60/100], Step [100/782], Loss: 0.4328, Accuracy: 85.94%
Epoch [60/100], Step [200/782], Loss: 0.4017, Accuracy: 85.94%
Epoch [60/100], Step [300/782], Loss: 0.7704, Accuracy: 75.00%
Epoch [60/100], Step [400/782], Loss: 0.4303, Accuracy: 84.38%
Epoch [60/100], Step [500/782], Loss: 0.4113, Accuracy: 85.94%
Epoch [60/100], Step [600/782], Loss: 0.4913, Accuracy: 84.38%
Epoch [60/100], Step [700/782], Loss: 0.3502, Accuracy: 90.62%
Test Accuracy of the model on the 10000 test images: 79.16 %
Epoch [61/100], Step [100/782], Loss: 0.2226, Accuracy: 93.75%
Epoch [61/100], Step [200/782], Loss: 0.4154, Accuracy: 82.81%
Epoch [61/100], Step [300/782], Loss: 0.5650, Accuracy: 81.25%
Epoch [61/100], Step [400/782], Loss: 0.2976, Accuracy: 89.06%
Epoch [61/100], Step [500/782], Loss: 0.3480, Accuracy: 89.06%
Epoch [61/100], Step [600/782], Loss: 0.4132, Accuracy: 87.50%
Epoch [61/100], Step [700/782], Loss: 0.2199, Accuracy: 92.19%

Test Accuracy of the model on the 10000 test images: 81.52 %
Epoch [62/100], Step [100/782], Loss: 0.3388, Accuracy: 85.94%
Epoch [62/100], Step [200/782], Loss: 0.4607, Accuracy: 85.94%
Epoch [62/100], Step [300/782], Loss: 0.4052, Accuracy: 84.38%
Epoch [62/100], Step [400/782], Loss: 0.5181, Accuracy: 78.12%
Epoch [62/100], Step [500/782], Loss: 0.4328, Accuracy: 82.81%
Epoch [62/100], Step [600/782], Loss: 0.3324, Accuracy: 89.06%
Epoch [62/100], Step [700/782], Loss: 0.2501, Accuracy: 90.62%
Test Accuracy of the model on the 10000 test images: 81.65 %
Epoch [63/100], Step [100/782], Loss: 0.3144, Accuracy: 87.50%
Epoch [63/100], Step [200/782], Loss: 0.3688, Accuracy: 81.25%
Epoch [63/100], Step [300/782], Loss: 0.3839, Accuracy: 85.94%
Epoch [63/100], Step [400/782], Loss: 0.2932, Accuracy: 90.62%
Epoch [63/100], Step [500/782], Loss: 0.5335, Accuracy: 82.81%
Epoch [63/100], Step [600/782], Loss: 0.4430, Accuracy: 85.94%
Epoch [63/100], Step [700/782], Loss: 0.3644, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 81.82 %
Epoch [64/100], Step [100/782], Loss: 0.4200, Accuracy: 89.06%
Epoch [64/100], Step [200/782], Loss: 0.2163, Accuracy: 92.19%
Epoch [64/100], Step [300/782], Loss: 0.3986, Accuracy: 89.06%
Epoch [64/100], Step [400/782], Loss: 0.2981, Accuracy: 90.62%
Epoch [64/100], Step [500/782], Loss: 0.3462, Accuracy: 87.50%
Epoch [64/100], Step [600/782], Loss: 0.4072, Accuracy: 89.06%
Epoch [64/100], Step [700/782], Loss: 0.3269, Accuracy: 84.38%
Test Accuracy of the model on the 10000 test images: 82.22 %
Epoch [65/100], Step [100/782], Loss: 0.3775, Accuracy: 90.62%
Epoch [65/100], Step [200/782], Loss: 0.6222, Accuracy: 76.56%
Epoch [65/100], Step [300/782], Loss: 0.3605, Accuracy: 87.50%
Epoch [65/100], Step [400/782], Loss: 0.5159, Accuracy: 82.81%
Epoch [65/100], Step [500/782], Loss: 0.4207, Accuracy: 85.94%
Epoch [65/100], Step [600/782], Loss: 0.4906, Accuracy: 82.81%
Epoch [65/100], Step [700/782], Loss: 0.3932, Accuracy: 89.06%
Test Accuracy of the model on the 10000 test images: 82.06 %
Epoch [66/100], Step [100/782], Loss: 0.5344, Accuracy: 82.81%
Epoch [66/100], Step [200/782], Loss: 0.5081, Accuracy: 79.69%
Epoch [66/100], Step [300/782], Loss: 0.4677, Accuracy: 84.38%
Epoch [66/100], Step [400/782], Loss: 0.5921, Accuracy: 76.56%
Epoch [66/100], Step [500/782], Loss: 0.5426, Accuracy: 81.25%
Epoch [66/100], Step [600/782], Loss: 0.2626, Accuracy: 90.62%
Epoch [66/100], Step [700/782], Loss: 0.3470, Accuracy: 90.62%

Test Accuracy of the model on the 10000 test images: 82.13 %
Epoch [67/100], Step [100/782], Loss: 0.4069, Accuracy: 84.38%
Epoch [67/100], Step [200/782], Loss: 0.4581, Accuracy: 89.06%
Epoch [67/100], Step [300/782], Loss: 0.3863, Accuracy: 90.62%
Epoch [67/100], Step [400/782], Loss: 0.3616, Accuracy: 89.06%
Epoch [67/100], Step [500/782], Loss: 0.4968, Accuracy: 81.25%
Epoch [67/100], Step [600/782], Loss: 0.3549, Accuracy: 85.94%
Epoch [67/100], Step [700/782], Loss: 0.4520, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 82.27 %
Epoch [68/100], Step [100/782], Loss: 0.4050, Accuracy: 85.94%
Epoch [68/100], Step [200/782], Loss: 0.4180, Accuracy: 87.50%
Epoch [68/100], Step [300/782], Loss: 0.4242, Accuracy: 87.50%
Epoch [68/100], Step [400/782], Loss: 0.4016, Accuracy: 82.81%
Epoch [68/100], Step [500/782], Loss: 0.3265, Accuracy: 87.50%
Epoch [68/100], Step [600/782], Loss: 0.4763, Accuracy: 79.69%
Epoch [68/100], Step [700/782], Loss: 0.5348, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 82.58 %
Epoch [69/100], Step [100/782], Loss: 0.2353, Accuracy: 93.75%
Epoch [69/100], Step [200/782], Loss: 0.4460, Accuracy: 85.94%
Epoch [69/100], Step [300/782], Loss: 0.5718, Accuracy: 76.56%
Epoch [69/100], Step [400/782], Loss: 0.2701, Accuracy: 90.62%
Epoch [69/100], Step [500/782], Loss: 0.4840, Accuracy: 87.50%
Epoch [69/100], Step [600/782], Loss: 0.3010, Accuracy: 89.06%
Epoch [69/100], Step [700/782], Loss: 0.3378, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 82.21 %
Epoch [70/100], Step [100/782], Loss: 0.4358, Accuracy: 82.81%
Epoch [70/100], Step [200/782], Loss: 0.4363, Accuracy: 89.06%
Epoch [70/100], Step [300/782], Loss: 0.4964, Accuracy: 87.50%
Epoch [70/100], Step [400/782], Loss: 0.3219, Accuracy: 85.94%
Epoch [70/100], Step [500/782], Loss: 0.4694, Accuracy: 82.81%
Epoch [70/100], Step [600/782], Loss: 0.3777, Accuracy: 84.38%
Epoch [70/100], Step [700/782], Loss: 0.3192, Accuracy: 89.06%
Test Accuracy of the model on the 10000 test images: 82.01 %
Epoch [71/100], Step [100/782], Loss: 0.3966, Accuracy: 85.94%
Epoch [71/100], Step [200/782], Loss: 0.2646, Accuracy: 93.75%
Epoch [71/100], Step [300/782], Loss: 0.4826, Accuracy: 87.50%
Epoch [71/100], Step [400/782], Loss: 0.3196, Accuracy: 87.50%
Epoch [71/100], Step [500/782], Loss: 0.2903, Accuracy: 89.06%
Epoch [71/100], Step [600/782], Loss: 0.3317, Accuracy: 89.06%
Epoch [71/100], Step [700/782], Loss: 0.2775, Accuracy: 90.62%

Test Accuracy of the model on the 10000 test images: 82.75 %
Epoch [72/100], Step [100/782], Loss: 0.5238, Accuracy: 84.38%
Epoch [72/100], Step [200/782], Loss: 0.3810, Accuracy: 82.81%
Epoch [72/100], Step [300/782], Loss: 0.2842, Accuracy: 84.38%
Epoch [72/100], Step [400/782], Loss: 0.4577, Accuracy: 82.81%
Epoch [72/100], Step [500/782], Loss: 0.4931, Accuracy: 84.38%
Epoch [72/100], Step [600/782], Loss: 0.2831, Accuracy: 90.62%
Epoch [72/100], Step [700/782], Loss: 0.3905, Accuracy: 85.94%
Test Accuracy of the model on the 10000 test images: 82.37 %
Epoch [73/100], Step [100/782], Loss: 0.4660, Accuracy: 85.94%
Epoch [73/100], Step [200/782], Loss: 0.4582, Accuracy: 89.06%
Epoch [73/100], Step [300/782], Loss: 0.4509, Accuracy: 82.81%
Epoch [73/100], Step [400/782], Loss: 0.4329, Accuracy: 84.38%
Epoch [73/100], Step [500/782], Loss: 0.5453, Accuracy: 82.81%
Epoch [73/100], Step [600/782], Loss: 0.1609, Accuracy: 95.31%
Epoch [73/100], Step [700/782], Loss: 0.2072, Accuracy: 93.75%
Test Accuracy of the model on the 10000 test images: 82.66 %
Epoch [74/100], Step [100/782], Loss: 0.4454, Accuracy: 87.50%
Epoch [74/100], Step [200/782], Loss: 0.5621, Accuracy: 82.81%
Epoch [74/100], Step [300/782], Loss: 0.2699, Accuracy: 89.06%
Epoch [74/100], Step [400/782], Loss: 0.4236, Accuracy: 85.94%
Epoch [74/100], Step [500/782], Loss: 0.4528, Accuracy: 87.50%
Epoch [74/100], Step [600/782], Loss: 0.2859, Accuracy: 90.62%
Epoch [74/100], Step [700/782], Loss: 0.3281, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 82.63 %
Epoch [75/100], Step [100/782], Loss: 0.2764, Accuracy: 89.06%
Epoch [75/100], Step [200/782], Loss: 0.3220, Accuracy: 82.81%
Epoch [75/100], Step [300/782], Loss: 0.2863, Accuracy: 89.06%
Epoch [75/100], Step [400/782], Loss: 0.3407, Accuracy: 87.50%
Epoch [75/100], Step [500/782], Loss: 0.3680, Accuracy: 87.50%
Epoch [75/100], Step [600/782], Loss: 0.2657, Accuracy: 92.19%
Epoch [75/100], Step [700/782], Loss: 0.4669, Accuracy: 85.94%
Test Accuracy of the model on the 10000 test images: 82.6 %
Epoch [76/100], Step [100/782], Loss: 0.2781, Accuracy: 95.31%
Epoch [76/100], Step [200/782], Loss: 0.3943, Accuracy: 85.94%
Epoch [76/100], Step [300/782], Loss: 0.2407, Accuracy: 89.06%
Epoch [76/100], Step [400/782], Loss: 0.4827, Accuracy: 79.69%
Epoch [76/100], Step [500/782], Loss: 0.3530, Accuracy: 89.06%
Epoch [76/100], Step [600/782], Loss: 0.5165, Accuracy: 75.00%
Epoch [76/100], Step [700/782], Loss: 0.6227, Accuracy: 79.69%

Test Accuracy of the model on the 10000 test images: 82.34 %

Epoch [77/100], Step [100/782], Loss: 0.4110, Accuracy: 84.38%

Epoch [77/100], Step [200/782], Loss: 0.3984, Accuracy: 85.94%

Epoch [77/100], Step [300/782], Loss: 0.1898, Accuracy: 90.62%

Epoch [77/100], Step [400/782], Loss: 0.5553, Accuracy: 81.25%

Epoch [77/100], Step [500/782], Loss: 0.4261, Accuracy: 81.25%

Epoch [77/100], Step [600/782], Loss: 0.2750, Accuracy: 87.50%

Epoch [77/100], Step [700/782], Loss: 0.5445, Accuracy: 82.81%

Test Accuracy of the model on the 10000 test images: 82.24 %

Epoch [78/100], Step [100/782], Loss: 0.4731, Accuracy: 82.81%

Epoch [78/100], Step [200/782], Loss: 0.2531, Accuracy: 87.50%

Epoch [78/100], Step [300/782], Loss: 0.4169, Accuracy: 89.06%

Epoch [78/100], Step [400/782], Loss: 0.1819, Accuracy: 95.31%

Epoch [78/100], Step [500/782], Loss: 0.5035, Accuracy: 85.94%

Epoch [78/100], Step [600/782], Loss: 0.3045, Accuracy: 87.50%

Epoch [78/100], Step [700/782], Loss: 0.3963, Accuracy: 89.06%

Test Accuracy of the model on the 10000 test images: 82.55 %

Epoch [79/100], Step [100/782], Loss: 0.4160, Accuracy: 82.81%

Epoch [79/100], Step [200/782], Loss: 0.5826, Accuracy: 81.25%

Epoch [79/100], Step [300/782], Loss: 0.5447, Accuracy: 78.12%

Epoch [79/100], Step [400/782], Loss: 0.3307, Accuracy: 85.94%

Epoch [79/100], Step [500/782], Loss: 0.5235, Accuracy: 79.69%

Epoch [79/100], Step [600/782], Loss: 0.3029, Accuracy: 90.62%

Epoch [79/100], Step [700/782], Loss: 0.3467, Accuracy: 89.06%

Test Accuracy of the model on the 10000 test images: 83.02 %

Epoch [80/100], Step [100/782], Loss: 0.5154, Accuracy: 81.25%

Epoch [80/100], Step [200/782], Loss: 0.5560, Accuracy: 79.69%

Epoch [80/100], Step [300/782], Loss: 0.3299, Accuracy: 85.94%

Epoch [80/100], Step [400/782], Loss: 0.6424, Accuracy: 81.25%

Epoch [80/100], Step [500/782], Loss: 0.3403, Accuracy: 90.62%

Epoch [80/100], Step [600/782], Loss: 0.4381, Accuracy: 82.81%

Epoch [80/100], Step [700/782], Loss: 0.3959, Accuracy: 84.38%

Test Accuracy of the model on the 10000 test images: 82.35 %

Epoch [81/100], Step [100/782], Loss: 0.1948, Accuracy: 92.19%

Epoch [81/100], Step [200/782], Loss: 0.3254, Accuracy: 87.50%

Epoch [81/100], Step [300/782], Loss: 0.5806, Accuracy: 78.12%

Epoch [81/100], Step [400/782], Loss: 0.3171, Accuracy: 89.06%

Epoch [81/100], Step [500/782], Loss: 0.3282, Accuracy: 87.50%

Epoch [81/100], Step [600/782], Loss: 0.2993, Accuracy: 90.62%

Epoch [81/100], Step [700/782], Loss: 0.2258, Accuracy: 90.62%

Test Accuracy of the model on the 10000 test images: 82.7 %

Epoch [82/100], Step [100/782], Loss: 0.3172, Accuracy: 87.50%

Epoch [82/100], Step [200/782], Loss: 0.3462, Accuracy: 84.38%

Epoch [82/100], Step [300/782], Loss: 0.2790, Accuracy: 93.75%

Epoch [82/100], Step [400/782], Loss: 0.2771, Accuracy: 89.06%

Epoch [82/100], Step [500/782], Loss: 0.2654, Accuracy: 92.19%

Epoch [82/100], Step [600/782], Loss: 0.4621, Accuracy: 81.25%

Epoch [82/100], Step [700/782], Loss: 0.1322, Accuracy: 96.88%

Test Accuracy of the model on the 10000 test images: 82.44 %

Epoch [83/100], Step [100/782], Loss: 0.3545, Accuracy: 85.94%

Epoch [83/100], Step [200/782], Loss: 0.4254, Accuracy: 87.50%

Epoch [83/100], Step [300/782], Loss: 0.4225, Accuracy: 85.94%

Epoch [83/100], Step [400/782], Loss: 0.3096, Accuracy: 89.06%

Epoch [83/100], Step [500/782], Loss: 0.4555, Accuracy: 82.81%

Epoch [83/100], Step [600/782], Loss: 0.5479, Accuracy: 82.81%

Epoch [83/100], Step [700/782], Loss: 0.2511, Accuracy: 92.19%

Test Accuracy of the model on the 10000 test images: 82.85 %

Epoch [84/100], Step [100/782], Loss: 0.3046, Accuracy: 89.06%

Epoch [84/100], Step [200/782], Loss: 0.2268, Accuracy: 92.19%

Epoch [84/100], Step [300/782], Loss: 0.2548, Accuracy: 90.62%

Epoch [84/100], Step [400/782], Loss: 0.4582, Accuracy: 85.94%

Epoch [84/100], Step [500/782], Loss: 0.4649, Accuracy: 79.69%

Epoch [84/100], Step [600/782], Loss: 0.5175, Accuracy: 82.81%

Epoch [84/100], Step [700/782], Loss: 0.3076, Accuracy: 89.06%

Test Accuracy of the model on the 10000 test images: 82.54 %

Epoch [85/100], Step [100/782], Loss: 0.2123, Accuracy: 92.19%

Epoch [85/100], Step [200/782], Loss: 0.1958, Accuracy: 93.75%

Epoch [85/100], Step [300/782], Loss: 0.3642, Accuracy: 87.50%

Epoch [85/100], Step [400/782], Loss: 0.5535, Accuracy: 81.25%

Epoch [85/100], Step [500/782], Loss: 0.4390, Accuracy: 90.62%

Epoch [85/100], Step [600/782], Loss: 0.1781, Accuracy: 96.88%

Epoch [85/100], Step [700/782], Loss: 0.3359, Accuracy: 85.94%

Test Accuracy of the model on the 10000 test images: 82.56 %

Epoch [86/100], Step [100/782], Loss: 0.2771, Accuracy: 92.19%

Epoch [86/100], Step [200/782], Loss: 0.3539, Accuracy: 90.62%

Epoch [86/100], Step [300/782], Loss: 0.6231, Accuracy: 76.56%

Epoch [86/100], Step [400/782], Loss: 0.3818, Accuracy: 85.94%

Epoch [86/100], Step [500/782], Loss: 0.3551, Accuracy: 89.06%

Epoch [86/100], Step [600/782], Loss: 0.3645, Accuracy: 85.94%

Epoch [86/100], Step [700/782], Loss: 0.4080, Accuracy: 89.06%

Test Accuracy of the model on the 10000 test images: 82.91 %
Epoch [87/100], Step [100/782], Loss: 0.3549, Accuracy: 85.94%
Epoch [87/100], Step [200/782], Loss: 0.2937, Accuracy: 93.75%
Epoch [87/100], Step [300/782], Loss: 0.4481, Accuracy: 89.06%
Epoch [87/100], Step [400/782], Loss: 0.4120, Accuracy: 82.81%
Epoch [87/100], Step [500/782], Loss: 0.5076, Accuracy: 81.25%
Epoch [87/100], Step [600/782], Loss: 0.6164, Accuracy: 76.56%
Epoch [87/100], Step [700/782], Loss: 0.3354, Accuracy: 92.19%
Test Accuracy of the model on the 10000 test images: 82.39 %
Epoch [88/100], Step [100/782], Loss: 0.4096, Accuracy: 89.06%
Epoch [88/100], Step [200/782], Loss: 0.3199, Accuracy: 84.38%
Epoch [88/100], Step [300/782], Loss: 0.4002, Accuracy: 89.06%
Epoch [88/100], Step [400/782], Loss: 0.3457, Accuracy: 85.94%
Epoch [88/100], Step [500/782], Loss: 0.3721, Accuracy: 82.81%
Epoch [88/100], Step [600/782], Loss: 0.1794, Accuracy: 92.19%
Epoch [88/100], Step [700/782], Loss: 0.3405, Accuracy: 90.62%
Test Accuracy of the model on the 10000 test images: 81.88 %
Epoch [89/100], Step [100/782], Loss: 0.4805, Accuracy: 81.25%
Epoch [89/100], Step [200/782], Loss: 0.3679, Accuracy: 82.81%
Epoch [89/100], Step [300/782], Loss: 0.2969, Accuracy: 92.19%
Epoch [89/100], Step [400/782], Loss: 0.5019, Accuracy: 81.25%
Epoch [89/100], Step [500/782], Loss: 0.2624, Accuracy: 90.62%
Epoch [89/100], Step [600/782], Loss: 0.6205, Accuracy: 82.81%
Epoch [89/100], Step [700/782], Loss: 0.5405, Accuracy: 81.25%
Test Accuracy of the model on the 10000 test images: 82.78 %
Epoch [90/100], Step [100/782], Loss: 0.2085, Accuracy: 92.19%
Epoch [90/100], Step [200/782], Loss: 0.4488, Accuracy: 85.94%
Epoch [90/100], Step [300/782], Loss: 0.2378, Accuracy: 92.19%
Epoch [90/100], Step [400/782], Loss: 0.2371, Accuracy: 90.62%
Epoch [90/100], Step [500/782], Loss: 0.2486, Accuracy: 90.62%
Epoch [90/100], Step [600/782], Loss: 0.4009, Accuracy: 84.38%
Epoch [90/100], Step [700/782], Loss: 0.3949, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 82.51 %
Epoch [91/100], Step [100/782], Loss: 0.2001, Accuracy: 92.19%
Epoch [91/100], Step [200/782], Loss: 0.2975, Accuracy: 93.75%
Epoch [91/100], Step [300/782], Loss: 0.2274, Accuracy: 90.62%
Epoch [91/100], Step [400/782], Loss: 0.3819, Accuracy: 85.94%
Epoch [91/100], Step [500/782], Loss: 0.2032, Accuracy: 93.75%
Epoch [91/100], Step [600/782], Loss: 0.2705, Accuracy: 90.62%
Epoch [91/100], Step [700/782], Loss: 0.2782, Accuracy: 92.19%

Test Accuracy of the model on the 10000 test images: 82.57 %
Epoch [92/100], Step [100/782], Loss: 0.3379, Accuracy: 84.38%
Epoch [92/100], Step [200/782], Loss: 0.4162, Accuracy: 85.94%
Epoch [92/100], Step [300/782], Loss: 0.4613, Accuracy: 85.94%
Epoch [92/100], Step [400/782], Loss: 0.3191, Accuracy: 85.94%
Epoch [92/100], Step [500/782], Loss: 0.3007, Accuracy: 89.06%
Epoch [92/100], Step [600/782], Loss: 0.3643, Accuracy: 84.38%
Epoch [92/100], Step [700/782], Loss: 0.4349, Accuracy: 85.94%
Test Accuracy of the model on the 10000 test images: 82.29 %
Epoch [93/100], Step [100/782], Loss: 0.3223, Accuracy: 82.81%
Epoch [93/100], Step [200/782], Loss: 0.3445, Accuracy: 90.62%
Epoch [93/100], Step [300/782], Loss: 0.5553, Accuracy: 81.25%
Epoch [93/100], Step [400/782], Loss: 0.3372, Accuracy: 87.50%
Epoch [93/100], Step [500/782], Loss: 0.2642, Accuracy: 92.19%
Epoch [93/100], Step [600/782], Loss: 0.3740, Accuracy: 93.75%
Epoch [93/100], Step [700/782], Loss: 0.2185, Accuracy: 93.75%
Test Accuracy of the model on the 10000 test images: 82.8 %
Epoch [94/100], Step [100/782], Loss: 0.2902, Accuracy: 85.94%
Epoch [94/100], Step [200/782], Loss: 0.5579, Accuracy: 79.69%
Epoch [94/100], Step [300/782], Loss: 0.4072, Accuracy: 89.06%
Epoch [94/100], Step [400/782], Loss: 0.4064, Accuracy: 85.94%
Epoch [94/100], Step [500/782], Loss: 0.3175, Accuracy: 87.50%
Epoch [94/100], Step [600/782], Loss: 0.2615, Accuracy: 87.50%
Epoch [94/100], Step [700/782], Loss: 0.4199, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 82.68 %
Epoch [95/100], Step [100/782], Loss: 0.3143, Accuracy: 92.19%
Epoch [95/100], Step [200/782], Loss: 0.2492, Accuracy: 90.62%
Epoch [95/100], Step [300/782], Loss: 0.3153, Accuracy: 89.06%
Epoch [95/100], Step [400/782], Loss: 0.3142, Accuracy: 85.94%
Epoch [95/100], Step [500/782], Loss: 0.3973, Accuracy: 85.94%
Epoch [95/100], Step [600/782], Loss: 0.3188, Accuracy: 87.50%
Epoch [95/100], Step [700/782], Loss: 0.4723, Accuracy: 82.81%
Test Accuracy of the model on the 10000 test images: 82.74 %
Epoch [96/100], Step [100/782], Loss: 0.1580, Accuracy: 95.31%
Epoch [96/100], Step [200/782], Loss: 0.3933, Accuracy: 84.38%
Epoch [96/100], Step [300/782], Loss: 0.2706, Accuracy: 90.62%
Epoch [96/100], Step [400/782], Loss: 0.2770, Accuracy: 90.62%
Epoch [96/100], Step [500/782], Loss: 0.2734, Accuracy: 87.50%
Epoch [96/100], Step [600/782], Loss: 0.3010, Accuracy: 92.19%
Epoch [96/100], Step [700/782], Loss: 0.2767, Accuracy: 90.62%

Test Accuracy of the model on the 10000 test images: 82.61 %
Epoch [97/100], Step [100/782], Loss: 0.1815, Accuracy: 96.88%
Epoch [97/100], Step [200/782], Loss: 0.3805, Accuracy: 82.81%
Epoch [97/100], Step [300/782], Loss: 0.5242, Accuracy: 84.38%
Epoch [97/100], Step [400/782], Loss: 0.4013, Accuracy: 87.50%
Epoch [97/100], Step [500/782], Loss: 0.3330, Accuracy: 89.06%
Epoch [97/100], Step [600/782], Loss: 0.3190, Accuracy: 85.94%
Epoch [97/100], Step [700/782], Loss: 0.2886, Accuracy: 87.50%
Test Accuracy of the model on the 10000 test images: 82.61 %
Epoch [98/100], Step [100/782], Loss: 0.3635, Accuracy: 89.06%
Epoch [98/100], Step [200/782], Loss: 0.3595, Accuracy: 90.62%
Epoch [98/100], Step [300/782], Loss: 0.3869, Accuracy: 84.38%
Epoch [98/100], Step [400/782], Loss: 0.4148, Accuracy: 84.38%
Epoch [98/100], Step [500/782], Loss: 0.3634, Accuracy: 84.38%
Epoch [98/100], Step [600/782], Loss: 0.3277, Accuracy: 89.06%
Epoch [98/100], Step [700/782], Loss: 0.3397, Accuracy: 90.62%
Test Accuracy of the model on the 10000 test images: 82.87 %
Epoch [99/100], Step [100/782], Loss: 0.4574, Accuracy: 82.81%
Epoch [99/100], Step [200/782], Loss: 0.4984, Accuracy: 84.38%
Epoch [99/100], Step [300/782], Loss: 0.3706, Accuracy: 87.50%
Epoch [99/100], Step [400/782], Loss: 0.4314, Accuracy: 82.81%
Epoch [99/100], Step [500/782], Loss: 0.4036, Accuracy: 89.06%
Epoch [99/100], Step [600/782], Loss: 0.5999, Accuracy: 81.25%
Epoch [99/100], Step [700/782], Loss: 0.3901, Accuracy: 89.06%
Test Accuracy of the model on the 10000 test images: 82.33 %
Epoch [100/100], Step [100/782], Loss: 0.3326, Accuracy: 92.19%
Epoch [100/100], Step [200/782], Loss: 0.4704, Accuracy: 81.25%
Epoch [100/100], Step [300/782], Loss: 0.2235, Accuracy: 90.62%
Epoch [100/100], Step [400/782], Loss: 0.3875, Accuracy: 85.94%
Epoch [100/100], Step [500/782], Loss: 0.3649, Accuracy: 87.50%
Epoch [100/100], Step [600/782], Loss: 0.2778, Accuracy: 84.38%
Epoch [100/100], Step [700/782], Loss: 0.4009, Accuracy: 90.62%
Test Accuracy of the model on the 10000 test images: 82.4 %