(COMP64501-Topics-in-Machine-Learning-Coursework) E-LOSXH67NN:COMP64501-Topics-in-Machine-Learning-Coursework a49626th$ uv run -m submission.fashion_training
Loading Fashion-MNIST dataset...
Training with parameters: {'learning_rate': 0.005, 'batch_size': 32}
Average Val Loss: 0.3190, Average Val Accuracy: 0.8972

Training with parameters: {'learning_rate': 0.005, 'batch_size': 64}
Average Val Loss: 0.2946, Average Val Accuracy: 0.9031

Training with parameters: {'learning_rate': 0.005, 'batch_size': 128}
Average Val Loss: 0.2832, Average Val Accuracy: 0.9050

Training with parameters: {'learning_rate': 0.001, 'batch_size': 32}
Average Val Loss: 0.2727, Average Val Accuracy: 0.9051

Training with parameters: {'learning_rate': 0.001, 'batch_size': 64}
Average Val Loss: 0.2557, Average Val Accuracy: 0.9099

Training with parameters: {'learning_rate': 0.001, 'batch_size': 128}
Average Val Loss: 0.2701, Average Val Accuracy: 0.9046

Training with parameters: {'learning_rate': 0.0005, 'batch_size': 32}
Average Val Loss: 0.2592, Average Val Accuracy: 0.9087

Training with parameters: {'learning_rate': 0.0005, 'batch_size': 64}
Average Val Loss: 0.2707, Average Val Accuracy: 0.9040

Training with parameters: {'learning_rate': 0.0005, 'batch_size': 128}
Average Val Loss: 0.2919, Average Val Accuracy: 0.8944

Training with parameters: {'learning_rate': 0.0001, 'batch_size': 32}
Average Val Loss: 0.3290, Average Val Accuracy: 0.8847

Training with parameters: {'learning_rate': 0.0001, 'batch_size': 64}
Average Val Loss: 0.3428, Average Val Accuracy: 0.8798

Training with parameters: {'learning_rate': 0.0001, 'batch_size': 128}
Average Val Loss: 0.3641, Average Val Accuracy: 0.8732

Best hyperparameters: {'learning_rate': 0.001, 'batch_size': 64} with loss 0.2557 and accuracy 0.9099
Using device: mps
Epoch [1/50], Training Loss: 0.4846, Val Loss: 0.3642, Val Accuracy: 0.8756
Epoch [2/50], Training Loss: 0.3344, Val Loss: 0.3158, Val Accuracy: 0.8883
Epoch [3/50], Training Loss: 0.2959, Val Loss: 0.2907, Val Accuracy: 0.8952
Epoch [4/50], Training Loss: 0.2717, Val Loss: 0.2932, Val Accuracy: 0.8932
Epoch [5/50], Training Loss: 0.2571, Val Loss: 0.2772, Val Accuracy: 0.9021
Epoch [6/50], Training Loss: 0.2397, Val Loss: 0.2734, Val Accuracy: 0.9007
Epoch [7/50], Training Loss: 0.2306, Val Loss: 0.2672, Val Accuracy: 0.9052

Epoch [8/50], Training Loss: 0.2194, Val Loss: 0.2566, Val Accuracy: 0.9085
Epoch [9/50], Training Loss: 0.2110, Val Loss: 0.2532, Val Accuracy: 0.9096
Epoch [10/50], Training Loss: 0.2029, Val Loss: 0.2518, Val Accuracy: 0.9128
Epoch [11/50], Training Loss: 0.1948, Val Loss: 0.2532, Val Accuracy: 0.9118
Epoch [12/50], Training Loss: 0.1884, Val Loss: 0.2497, Val Accuracy: 0.9117
Epoch [13/50], Training Loss: 0.1831, Val Loss: 0.2628, Val Accuracy: 0.9057
Epoch [14/50], Training Loss: 0.1747, Val Loss: 0.2495, Val Accuracy: 0.9125
Epoch [15/50], Training Loss: 0.1694, Val Loss: 0.2564, Val Accuracy: 0.9098
Epoch [16/50], Training Loss: 0.1649, Val Loss: 0.2727, Val Accuracy: 0.9074
Epoch [17/50], Training Loss: 0.1602, Val Loss: 0.2520, Val Accuracy: 0.9132
Epoch [18/50], Training Loss: 0.1565, Val Loss: 0.2488, Val Accuracy: 0.9131
Epoch [19/50], Training Loss: 0.1525, Val Loss: 0.2696, Val Accuracy: 0.9083
Epoch [20/50], Training Loss: 0.1475, Val Loss: 0.2683, Val Accuracy: 0.9067
Epoch [21/50], Training Loss: 0.1432, Val Loss: 0.2787, Val Accuracy: 0.9043
Epoch [22/50], Training Loss: 0.1413, Val Loss: 0.2734, Val Accuracy: 0.9099
Epoch [23/50], Training Loss: 0.1366, Val Loss: 0.2968, Val Accuracy: 0.9013
Early stopping triggered at 23.
(COMP64501-Topics-in-Machine-Learning-Coursework) E-LOSXH67NN:COMP64501-Topics-in-Machine-Learning-Coursework a49626th$ uv run model_calls.py
Using device: cpu
Epoch [1/1], Training Loss: 2.7104, Val Loss: 2.5554, Val Accuracy: 0.0000
STUDENT_ID: 14268736
ACCURACY: 0.896000
PARAMETERS: 18940
TRAINING_CHECK: PASSED
(COMP64501-Topics-in-Machine-Learning-Coursework) E-LOSXH67NN:COMP64501-Topics-in-Machine-Learning-Coursework a49626th$