```
cuda
```

loaded and preprocessed data

split data

train size: 5985 samples

validation size: 1995 samples

test size: 1995 samples

train class distribution: {0: 1875, 1: 4110}

validation class distribution: {0: 625, 1: 1370}

test class distribution: {0: 625, 1: 1370}

epoch 1, val loss: 0.4735, val acc: 0.8165

epoch 2, val loss: 0.4256, val acc: 0.8206

epoch 3, val loss: 0.5126, val acc: 0.7584

epoch 4, val loss: 0.3192, val acc: 0.8832

epoch 5, val loss: 0.2804, val acc: 0.8992

epoch 6, val loss: 0.2144, val acc: 0.9218

epoch 7, val loss: 0.2153, val acc: 0.9213

epoch 8, val loss: 0.1110, val acc: 0.9604

epoch 9, val loss: 0.0891, val acc: 0.9719

epoch 10, val loss: 0.0773, val acc: 0.9734

epoch 11, val loss: 0.0495, val acc: 0.9845

epoch 12, val loss: 0.0474, val acc: 0.9810

epoch 13, val loss: 0.0874, val acc: 0.9709

epoch 14, val loss: 0.0403, val acc: 0.9845

epoch 15, val loss: 0.0338, val acc: 0.9880

epoch 16, val loss: 0.0232, val acc: 0.9940

epoch 17, val loss: 0.0187, val acc: 0.9940

epoch 18, val loss: 0.0234, val acc: 0.9960

epoch 19, val loss: 0.0216, val acc: 0.9965

epoch 20, val loss: 0.0365, val acc: 0.9930

epoch 21, val loss: 0.0381, val acc: 0.9895

epoch 22, val loss: 0.0210, val acc: 0.9930

early stopping triggered.

## classification report:

precision recall f1-score support

0 0.99 0.990.99 625 0.99 1 0.99 0.99 1370

0.99 accuracy 1995

macro avg 0.99 0.99 0.99 1995 weighted avg 0.99 0.99 0.99 1995

final test accuracy: 0.9925



