PS C:\Users\hongyang.sun\Desktop\demo> & C:/Anacondaaa/python.exe c:/Users/hongyang.sun/Desktop/demo/test.py ||数据集MUU\_20\_rep2

True

训练标签形状: (220, 325)

测试标签形状: (220, 325)

高光谱数据形状: (64, 220, 325)

LiDAR数据形状: (2, 220, 325)

处理后高光谱数据形状: (220, 325, 64)

处理后LiDAR数据形状: (220, 325)

填充后高光谱数据形状: (230, 335, 64)

填充后LiDAR数据形状: (230, 335)

样本高光谱图像块形状: (64, 11, 11)

样本LiDAR图像块形状: (11, 11)

类别数量: tensor(11)

Epoch: 0||ACC: 43.44%

Epoch: 10||ACC: 16.57%

Epoch: 20||ACC: 45.59%

Epoch: 30||ACC: 57.49%

Epoch: 40||ACC: 65.30%

Epoch: 50||ACC: 67.67%

Epoch: 60||ACC: 70.05%

Epoch: 70||ACC: 71.11%

Epoch: 80||ACC: 71.95%

Epoch: 90||ACC: 72.00%

Epoch: 100||ACC: 73.01%

Overall Accuracy (OA): 0.730057792657153

Average Accuracy (AA): 0.745598524230708

Kappa Coefficient: 0.6579865643002996

Class 0 Accuracy: 0.8105

Class 1 Accuracy: 0.7085

Class 2 Accuracy: 0.2474

Class 3 Accuracy: 0.7951

Class 4 Accuracy: 0.7999

Class 5 Accuracy: 0.9821

Class 6 Accuracy: 0.8427

Class 7 Accuracy: 0.8693

Class 8 Accuracy: 0.4908

Class 9 Accuracy: 0.6994

Class 10 Accuracy: 0.9558

Epoch: 110||ACC: 73.97%

Epoch: 120||ACC: 74.15%

Epoch: 130||ACC: 75.06%

Epoch: 140||ACC: 75.53%

Epoch: 150||ACC: 76.17%

Epoch: 160||ACC: 76.19%

Epoch: 170||ACC: 76.87%

Epoch: 180||ACC: 77.08%

Epoch: 190||ACC: 76.98%

Epoch: 200||ACC: 77.20%

Overall Accuracy (OA): 0.7719901995623468

Average Accuracy (AA): 0.7769711149353646

Kappa Coefficient: 0.7100317474693705

Class 0 Accuracy: 0.8205

Class 1 Accuracy: 0.7087

Class 2 Accuracy: 0.5829

Class 3 Accuracy: 0.7901

Class 4 Accuracy: 0.7903

Class 5 Accuracy: 0.9955

Class 6 Accuracy: 0.8423

Class 7 Accuracy: 0.8146

Class 8 Accuracy: 0.5788

Class 9 Accuracy: 0.6871

Class 10 Accuracy: 0.9357

Epoch: 210||ACC: 76.73%

Epoch: 220||ACC: 76.44%

Epoch: 230||ACC: 76.36%

Epoch: 240||ACC: 76.46%

Epoch: 250||ACC: 76.56%

Epoch: 260||ACC: 76.17%

Epoch: 270||ACC: 76.43%

Epoch: 280||ACC: 76.55%

Epoch: 290||ACC: 75.81%

Epoch: 300||ACC: 76.04%

Overall Accuracy (OA): 0.7603568556305759

Average Accuracy (AA): 0.7656493168914417

Kappa Coefficient: 0.6964134318445683

Class 0 Accuracy: 0.8124

Class 1 Accuracy: 0.7308

Class 2 Accuracy: 0.5965

Class 3 Accuracy: 0.7608

Class 4 Accuracy: 0.7705

Class 5 Accuracy: 0.9910

Class 6 Accuracy: 0.8242

Class 7 Accuracy: 0.7574

Class 8 Accuracy: 0.5516

Class 9 Accuracy: 0.6871

Class 10 Accuracy: 0.9398

Epoch: 310||ACC: 75.80%

Epoch: 320||ACC: 75.88%

Epoch: 330||ACC: 75.73%

Epoch: 340||ACC: 75.71%

Epoch: 350||ACC: 75.56%

Epoch: 360||ACC: 75.83%

Epoch: 370||ACC: 75.61%

Epoch: 380||ACC: 75.64%

Epoch: 390||ACC: 75.69%

Epoch: 400||ACC: 75.60%

Overall Accuracy (OA): 0.756017730562777

Average Accuracy (AA): 0.7662291594795453

Kappa Coefficient: 0.6914744988380492

Class 0 Accuracy: 0.8063

Class 1 Accuracy: 0.7228

Class 2 Accuracy: 0.6099

Class 3 Accuracy: 0.7630

Class 4 Accuracy: 0.7630

Class 5 Accuracy: 0.9798

Class 6 Accuracy: 0.8211

Class 7 Accuracy: 0.7328

Class 8 Accuracy: 0.5949

Class 9 Accuracy: 0.6871

Class 10 Accuracy: 0.9478

Epoch: 410||ACC: 75.59%

Epoch: 420||ACC: 75.64%

Epoch: 430||ACC: 75.56%

Epoch: 440||ACC: 75.59%

Epoch: 450||ACC: 75.57%

Epoch: 460||ACC: 75.54%

Epoch: 470||ACC: 75.56%

Epoch: 480||ACC: 75.53%

Epoch: 490||ACC: 75.54%

Epoch: 500||ACC: 75.45%

Overall Accuracy (OA): 0.7545027774141059

Average Accuracy (AA): 0.7648443738252966

Kappa Coefficient: 0.6898150560130557

Class 0 Accuracy: 0.8018

Class 2 Accuracy: 0.6140

Class 3 Accuracy: 0.7608

Class 4 Accuracy: 0.7677

Class 5 Accuracy: 0.9798

Class 6 Accuracy: 0.8256

Class 7 Accuracy: 0.7302

Class 8 Accuracy: 0.5927

Class 9 Accuracy: 0.6748

Class 10 Accuracy: 0.9478

总训练时间: 4756.28秒