

top3_0.001_250

April 17, 2025

```
[1]: from tqdm import tqdm
import torch
import torch.nn as nn
import torch.optim as optim
from sklearn.metrics import accuracy_score, classification_report
import pandas as pd
from social_lstm_classifier import SocialLSTMClassifier

trajectory_features = ['Positionx', 'Positiony', 'Distance', 'Speed', 'Speed_
↳Change', 'Direction', 'Direction Change']

feature_combos = {
    # 'xy_2': ['Positionx', 'Positiony'],
    # 'xyd_3': ['Positionx', 'Positiony', 'Distance'],
    # 'xydsdc_7': ['Positionx', 'Positiony', 'Distance', 'Speed', 'Direction',
↳'Speed Change', 'Direction Change'],
    # 'xysd_4': ['Positionx', 'Positiony', 'Speed', 'Direction'],
    # 'xyds_4': ['Positionx', 'Positiony', 'Distance', 'Speed'],
    'xydd_4': ['Positionx', 'Positiony', 'Distance', 'Direction'],
    'xydsc_5': ['Positionx', 'Positiony', 'Distance', 'Speed', 'Speed Change'],
    # 'xyddc_5': ['Positionx', 'Positiony', 'Distance', 'Direction', 'Direction
↳Change'],
    # 'xys_3': ['Positionx', 'Positiony', 'Speed'],
    'xydi_3': ['Positionx', 'Positiony', 'Direction'],
    # 'xysc_4': ['Positionx', 'Positiony', 'Speed', 'Speed Change'],
    # 'xydc_4': ['Positionx', 'Positiony', 'Direction', 'Direction Change']
}

train_data = torch.load("./train_social_lstm_full.pt")
test_data = torch.load("./test_social_lstm_full.pt")

results = []

def run_experiment(feature_set, name):
    input_size = len(feature_set)
    index_map = [trajectory_features.index(f) for f in feature_set]
```

```

model = SocialLSTMClassifier(input_size=input_size)
criterion = nn.CrossEntropyLoss()
optimizer = optim.Adam(model.parameters(), lr=0.001)
epochs = 250

model.train()
for epoch in range(epochs):
    total_loss = 0.0
    for sample in tqdm(train_data, desc=f"Epoch {epoch+1}/{epochs}"):
        # traj = sample['trajectory'][:, index_map].unsqueeze(1)
        # neighbors = sample['neighbors'][:, :, index_map]
        traj = sample['trajectory'][:, index_map] # [T, 1, D]
        neighbors = [frame[:, index_map] for frame in sample['neighbors']]
        ↪ # list[T][N_i, D]

        mask = sample['neighbor_mask']
        label = torch.tensor([int(sample['cluster']) - 1], dtype=torch.long)

        optimizer.zero_grad()
        logits = model(traj, neighbors, mask)
        loss = criterion(logits, label)
        loss.backward()
        optimizer.step()

        total_loss += loss.item()

    avg_loss = total_loss / len(train_data)
    print(f"\n[Feature Set: {name}] Epoch [{epoch+1}/{epochs}] - Avg Loss:
    ↪ {avg_loss:.4f}")

# model.eval()
# y_true = []
# y_pred = []
# with torch.no_grad():
#     for sample in tqdm(train_data, desc=f"Epoch {epoch+1}/{epochs}"):
#         # traj = sample['trajectory'][:, index_map].unsqueeze(1)
#         # neighbors = sample['neighbors'][:, :, index_map]
#         traj = sample['trajectory'][:, index_map] # [T, 1, D]
#         neighbors = [frame[:, index_map] for frame in
        ↪ sample['neighbors']] # list[T][N_i, D]
#         mask = sample['neighbor_mask']
#         label = int(sample['cluster']) - 1
#         logits = model(traj, neighbors, mask)
#         pred = logits.argmax(dim=1).item()
#         y_true.append(label)
#         y_pred.append(pred)

```

```

model.eval()
y_true = []
y_pred = []
with torch.no_grad():
    for sample in tqdm(test_data, desc=f"[Eval] {name}"):
        traj = sample['trajectory'][:, index_map]
        neighbors = [frame[:, index_map] for frame in sample['neighbors']]
        mask = sample['neighbor_mask']
        label = int(sample['cluster']) - 1
        logits = model(traj, neighbors, mask)
        pred = logits.argmax(dim=1).item()
        y_true.append(label)
        y_pred.append(pred)

acc = accuracy_score(y_true, y_pred)
clf_report = classification_report(y_true, y_pred, output_dict=True)
results.append({
    "Feature_Set": name,
    "Accuracy": acc,
    "Macro_F1": clf_report['macro avg']['f1-score'],
    "Weighted_F1": clf_report['weighted avg']['f1-score']
})

for name, feats in feature_combos.items():
    run_experiment(feats, name)

```

/var/folders/nt/7f1y5h8s6qd2mh1ypgjkgbpw0000gn/T/ipykernel_72854/1605445238.py:26: FutureWarning: You are using `torch.load` with `weights_only=False` (the current default value), which uses the default pickle module implicitly. It is possible to construct malicious pickle data which will execute arbitrary code during unpickling (See <https://github.com/pytorch/pytorch/blob/main/SECURITY.md#untrusted-models> for more details). In a future release, the default value for `weights_only` will be flipped to `True`. This limits the functions that could be executed during unpickling. Arbitrary objects will no longer be allowed to be loaded via this mode unless they are explicitly allowlisted by the user via `torch.serialization.add_safe_globals`. We recommend you start setting `weights_only=True` for any use case where you don't have full control of the loaded file. Please open an issue on GitHub for any issues related to this experimental feature.

```

train_data = torch.load("./train_social_lstm_full.pt")
/var/folders/nt/7f1y5h8s6qd2mh1ypgjkgbpw0000gn/T/ipykernel_72854/1605445238.py:27: FutureWarning: You are using `torch.load` with `weights_only=False` (the
current default value), which uses the default pickle module implicitly. It is
possible to construct malicious pickle data which will execute arbitrary code
during unpickling (See

```

<https://github.com/pytorch/pytorch/blob/main/SECURITY.md#untrusted-models> for more details). In a future release, the default value for `weights_only` will be flipped to `True`. This limits the functions that could be executed during unpickling. Arbitrary objects will no longer be allowed to be loaded via this mode unless they are explicitly allowlisted by the user via `torch.serialization.add_safe_globals`. We recommend you start setting `weights_only=True` for any use case where you don't have full control of the loaded file. Please open an issue on GitHub for any issues related to this experimental feature.

```
test_data = torch.load("./test_social_lstm_full.pt")
Epoch 1/250: 100%|          | 570/570 [00:03<00:00, 177.42it/s]
```

[Feature Set: xydd_4] Epoch [1/250] - Avg Loss: 0.6748

```
Epoch 2/250: 100%|          | 570/570 [00:03<00:00, 174.92it/s]
```

[Feature Set: xydd_4] Epoch [2/250] - Avg Loss: 0.6644

```
Epoch 3/250: 100%|          | 570/570 [00:03<00:00, 178.94it/s]
```

[Feature Set: xydd_4] Epoch [3/250] - Avg Loss: 0.6576

```
Epoch 4/250: 100%|          | 570/570 [00:03<00:00, 178.58it/s]
```

[Feature Set: xydd_4] Epoch [4/250] - Avg Loss: 0.6527

```
Epoch 5/250: 100%|          | 570/570 [00:03<00:00, 177.63it/s]
```

[Feature Set: xydd_4] Epoch [5/250] - Avg Loss: 0.6395

```
Epoch 6/250: 100%|          | 570/570 [00:03<00:00, 177.23it/s]
```

[Feature Set: xydd_4] Epoch [6/250] - Avg Loss: 0.6241

```
Epoch 7/250: 100%|          | 570/570 [00:03<00:00, 169.09it/s]
```

[Feature Set: xydd_4] Epoch [7/250] - Avg Loss: 0.6067

```
Epoch 8/250: 100%|          | 570/570 [00:03<00:00, 166.78it/s]
```

[Feature Set: xydd_4] Epoch [8/250] - Avg Loss: 0.5818

```
Epoch 9/250: 100%|          | 570/570 [00:03<00:00, 180.64it/s]
```

[Feature Set: xydd_4] Epoch [9/250] - Avg Loss: 0.5701

```
Epoch 10/250: 100%|          | 570/570 [00:03<00:00, 181.63it/s]
```

[Feature Set: xydd_4] Epoch [10/250] - Avg Loss: 0.5452
Epoch 11/250: 100%| | 570/570 [00:03<00:00, 182.30it/s]

[Feature Set: xydd_4] Epoch [11/250] - Avg Loss: 0.5166
Epoch 12/250: 100%| | 570/570 [00:03<00:00, 175.13it/s]

[Feature Set: xydd_4] Epoch [12/250] - Avg Loss: 0.5004
Epoch 13/250: 100%| | 570/570 [00:03<00:00, 182.48it/s]

[Feature Set: xydd_4] Epoch [13/250] - Avg Loss: 0.4842
Epoch 14/250: 100%| | 570/570 [00:03<00:00, 180.63it/s]

[Feature Set: xydd_4] Epoch [14/250] - Avg Loss: 0.4621
Epoch 15/250: 100%| | 570/570 [00:03<00:00, 179.21it/s]

[Feature Set: xydd_4] Epoch [15/250] - Avg Loss: 0.4426
Epoch 16/250: 100%| | 570/570 [00:03<00:00, 182.31it/s]

[Feature Set: xydd_4] Epoch [16/250] - Avg Loss: 0.4086
Epoch 17/250: 100%| | 570/570 [00:03<00:00, 177.81it/s]

[Feature Set: xydd_4] Epoch [17/250] - Avg Loss: 0.4018
Epoch 18/250: 100%| | 570/570 [00:03<00:00, 179.61it/s]

[Feature Set: xydd_4] Epoch [18/250] - Avg Loss: 0.3983
Epoch 19/250: 100%| | 570/570 [00:03<00:00, 183.18it/s]

[Feature Set: xydd_4] Epoch [19/250] - Avg Loss: 0.3686
Epoch 20/250: 100%| | 570/570 [00:03<00:00, 181.83it/s]

[Feature Set: xydd_4] Epoch [20/250] - Avg Loss: 0.3630
Epoch 21/250: 100%| | 570/570 [00:03<00:00, 182.36it/s]

[Feature Set: xydd_4] Epoch [21/250] - Avg Loss: 0.3558
Epoch 22/250: 100%| | 570/570 [00:03<00:00, 182.62it/s]

[Feature Set: xydd_4] Epoch [22/250] - Avg Loss: 0.3230
Epoch 23/250: 100%| | 570/570 [00:03<00:00, 180.57it/s]

[Feature Set: xydd_4] Epoch [23/250] - Avg Loss: 0.3505
Epoch 24/250: 100%| | 570/570 [00:03<00:00, 180.53it/s]

[Feature Set: xydd_4] Epoch [24/250] - Avg Loss: 0.3209
Epoch 25/250: 100%| | 570/570 [00:03<00:00, 178.50it/s]

[Feature Set: xydd_4] Epoch [25/250] - Avg Loss: 0.3149
Epoch 26/250: 100%| | 570/570 [00:03<00:00, 181.84it/s]

[Feature Set: xydd_4] Epoch [26/250] - Avg Loss: 0.2878
Epoch 27/250: 100%| | 570/570 [00:03<00:00, 183.43it/s]

[Feature Set: xydd_4] Epoch [27/250] - Avg Loss: 0.2928
Epoch 28/250: 100%| | 570/570 [00:03<00:00, 181.94it/s]

[Feature Set: xydd_4] Epoch [28/250] - Avg Loss: 0.2751
Epoch 29/250: 100%| | 570/570 [00:03<00:00, 181.11it/s]

[Feature Set: xydd_4] Epoch [29/250] - Avg Loss: 0.2601
Epoch 30/250: 100%| | 570/570 [00:03<00:00, 183.36it/s]

[Feature Set: xydd_4] Epoch [30/250] - Avg Loss: 0.2523
Epoch 31/250: 100%| | 570/570 [00:03<00:00, 183.33it/s]

[Feature Set: xydd_4] Epoch [31/250] - Avg Loss: 0.2860
Epoch 32/250: 100%| | 570/570 [00:03<00:00, 183.52it/s]

[Feature Set: xydd_4] Epoch [32/250] - Avg Loss: 0.2743
Epoch 33/250: 100%| | 570/570 [00:03<00:00, 183.85it/s]

[Feature Set: xydd_4] Epoch [33/250] - Avg Loss: 0.2449
Epoch 34/250: 100%| | 570/570 [00:03<00:00, 181.11it/s]

[Feature Set: xydd_4] Epoch [34/250] - Avg Loss: 0.2476
Epoch 35/250: 100%| | 570/570 [00:03<00:00, 181.20it/s]

[Feature Set: xydd_4] Epoch [35/250] - Avg Loss: 0.2295
Epoch 36/250: 100%| | 570/570 [00:03<00:00, 181.80it/s]

[Feature Set: xydd_4] Epoch [36/250] - Avg Loss: 0.2180
Epoch 37/250: 100%| | 570/570 [00:03<00:00, 181.48it/s]

[Feature Set: xydd_4] Epoch [37/250] - Avg Loss: 0.2067
Epoch 38/250: 100%| | 570/570 [00:03<00:00, 183.70it/s]

[Feature Set: xydd_4] Epoch [38/250] - Avg Loss: 0.2228
Epoch 39/250: 100%| | 570/570 [00:03<00:00, 182.34it/s]

[Feature Set: xydd_4] Epoch [39/250] - Avg Loss: 0.1982
Epoch 40/250: 100%| | 570/570 [00:03<00:00, 183.86it/s]

[Feature Set: xydd_4] Epoch [40/250] - Avg Loss: 0.2235
Epoch 41/250: 100%| | 570/570 [00:03<00:00, 182.57it/s]

[Feature Set: xydd_4] Epoch [41/250] - Avg Loss: 0.2078
Epoch 42/250: 100%| | 570/570 [00:03<00:00, 182.63it/s]

[Feature Set: xydd_4] Epoch [42/250] - Avg Loss: 0.2149
Epoch 43/250: 100%| | 570/570 [00:03<00:00, 183.49it/s]

[Feature Set: xydd_4] Epoch [43/250] - Avg Loss: 0.2014
Epoch 44/250: 100%| | 570/570 [00:03<00:00, 173.67it/s]

[Feature Set: xydd_4] Epoch [44/250] - Avg Loss: 0.1623
Epoch 45/250: 100%| | 570/570 [00:03<00:00, 177.85it/s]

[Feature Set: xydd_4] Epoch [45/250] - Avg Loss: 0.1988
Epoch 46/250: 100%| | 570/570 [00:03<00:00, 178.30it/s]

[Feature Set: xydd_4] Epoch [46/250] - Avg Loss: 0.1740
Epoch 47/250: 100%| | 570/570 [00:03<00:00, 182.18it/s]

[Feature Set: xydd_4] Epoch [47/250] - Avg Loss: 0.1736
Epoch 48/250: 100%| | 570/570 [00:03<00:00, 181.47it/s]

[Feature Set: xydd_4] Epoch [48/250] - Avg Loss: 0.2015
Epoch 49/250: 100%| | 570/570 [00:03<00:00, 179.85it/s]

[Feature Set: xydd_4] Epoch [49/250] - Avg Loss: 0.1251
Epoch 50/250: 100%| | 570/570 [00:03<00:00, 181.44it/s]

[Feature Set: xydd_4] Epoch [50/250] - Avg Loss: 0.1604
Epoch 51/250: 100%| | 570/570 [00:03<00:00, 183.09it/s]

[Feature Set: xydd_4] Epoch [51/250] - Avg Loss: 0.1650
Epoch 52/250: 100%| | 570/570 [00:03<00:00, 182.50it/s]

[Feature Set: xydd_4] Epoch [52/250] - Avg Loss: 0.1268
Epoch 53/250: 100%| | 570/570 [00:03<00:00, 181.13it/s]

[Feature Set: xydd_4] Epoch [53/250] - Avg Loss: 0.1185
Epoch 54/250: 100%| | 570/570 [00:03<00:00, 171.04it/s]

[Feature Set: xydd_4] Epoch [54/250] - Avg Loss: 0.1091
Epoch 55/250: 100%| | 570/570 [00:03<00:00, 169.38it/s]

[Feature Set: xydd_4] Epoch [55/250] - Avg Loss: 0.1495
Epoch 56/250: 100%| | 570/570 [00:03<00:00, 173.58it/s]

[Feature Set: xydd_4] Epoch [56/250] - Avg Loss: 0.1757
Epoch 57/250: 100%| | 570/570 [00:03<00:00, 181.79it/s]

[Feature Set: xydd_4] Epoch [57/250] - Avg Loss: 0.1178
Epoch 58/250: 100%| | 570/570 [00:03<00:00, 179.51it/s]

[Feature Set: xydd_4] Epoch [58/250] - Avg Loss: 0.1629
Epoch 59/250: 100%| | 570/570 [00:03<00:00, 181.36it/s]

[Feature Set: xydd_4] Epoch [59/250] - Avg Loss: 0.1225
Epoch 60/250: 100%| | 570/570 [00:03<00:00, 184.35it/s]

[Feature Set: xydd_4] Epoch [60/250] - Avg Loss: 0.1016
Epoch 61/250: 100%| | 570/570 [00:03<00:00, 182.61it/s]

[Feature Set: xydd_4] Epoch [61/250] - Avg Loss: 0.1058
Epoch 62/250: 100%| | 570/570 [00:03<00:00, 182.96it/s]

[Feature Set: xydd_4] Epoch [62/250] - Avg Loss: 0.1439
Epoch 63/250: 100%| | 570/570 [00:03<00:00, 153.04it/s]

[Feature Set: xydd_4] Epoch [63/250] - Avg Loss: 0.1057
Epoch 64/250: 100%| | 570/570 [00:03<00:00, 180.92it/s]

[Feature Set: xydd_4] Epoch [64/250] - Avg Loss: 0.0975
Epoch 65/250: 100%| | 570/570 [00:03<00:00, 182.96it/s]

[Feature Set: xydd_4] Epoch [65/250] - Avg Loss: 0.0977
Epoch 66/250: 100%| | 570/570 [00:03<00:00, 181.60it/s]

[Feature Set: xydd_4] Epoch [66/250] - Avg Loss: 0.1403
Epoch 67/250: 100%| | 570/570 [00:03<00:00, 180.76it/s]

[Feature Set: xydd_4] Epoch [67/250] - Avg Loss: 0.1032
Epoch 68/250: 100%| | 570/570 [00:03<00:00, 182.45it/s]

[Feature Set: xydd_4] Epoch [68/250] - Avg Loss: 0.0734
Epoch 69/250: 100%| | 570/570 [00:03<00:00, 182.59it/s]

[Feature Set: xydd_4] Epoch [69/250] - Avg Loss: 0.0725
Epoch 70/250: 100%| | 570/570 [00:03<00:00, 181.82it/s]

[Feature Set: xydd_4] Epoch [70/250] - Avg Loss: 0.1824
Epoch 71/250: 100%| | 570/570 [00:03<00:00, 183.63it/s]

[Feature Set: xydd_4] Epoch [71/250] - Avg Loss: 0.1273
Epoch 72/250: 100%| | 570/570 [00:03<00:00, 175.93it/s]

[Feature Set: xydd_4] Epoch [72/250] - Avg Loss: 0.0742
Epoch 73/250: 100%| | 570/570 [00:03<00:00, 181.88it/s]

[Feature Set: xydd_4] Epoch [73/250] - Avg Loss: 0.0637
Epoch 74/250: 100%| | 570/570 [00:03<00:00, 180.21it/s]

[Feature Set: xydd_4] Epoch [74/250] - Avg Loss: 0.0631
Epoch 75/250: 100%| | 570/570 [00:03<00:00, 179.93it/s]

[Feature Set: xydd_4] Epoch [75/250] - Avg Loss: 0.1410
Epoch 76/250: 100%| | 570/570 [00:03<00:00, 183.22it/s]

[Feature Set: xydd_4] Epoch [76/250] - Avg Loss: 0.0657
Epoch 77/250: 100%| | 570/570 [00:03<00:00, 179.39it/s]

[Feature Set: xydd_4] Epoch [77/250] - Avg Loss: 0.0576
Epoch 78/250: 100%| | 570/570 [00:03<00:00, 180.65it/s]

[Feature Set: xydd_4] Epoch [78/250] - Avg Loss: 0.0757
Epoch 79/250: 100%| | 570/570 [00:03<00:00, 183.63it/s]

[Feature Set: xydd_4] Epoch [79/250] - Avg Loss: 0.1472
Epoch 80/250: 100%| | 570/570 [00:03<00:00, 182.31it/s]

[Feature Set: xydd_4] Epoch [80/250] - Avg Loss: 0.0907
Epoch 81/250: 100%| | 570/570 [00:03<00:00, 184.32it/s]

[Feature Set: xydd_4] Epoch [81/250] - Avg Loss: 0.0608
Epoch 82/250: 100%| | 570/570 [00:03<00:00, 182.02it/s]

[Feature Set: xydd_4] Epoch [82/250] - Avg Loss: 0.0455
Epoch 83/250: 100%| | 570/570 [00:03<00:00, 182.68it/s]

[Feature Set: xydd_4] Epoch [83/250] - Avg Loss: 0.1021
Epoch 84/250: 100%| | 570/570 [00:03<00:00, 183.19it/s]

[Feature Set: xydd_4] Epoch [84/250] - Avg Loss: 0.1177
Epoch 85/250: 100%| | 570/570 [00:03<00:00, 181.62it/s]

[Feature Set: xydd_4] Epoch [85/250] - Avg Loss: 0.0740
Epoch 86/250: 100%| | 570/570 [00:03<00:00, 184.32it/s]

[Feature Set: xydd_4] Epoch [86/250] - Avg Loss: 0.0696
Epoch 87/250: 100%| | 570/570 [00:03<00:00, 182.89it/s]

[Feature Set: xydd_4] Epoch [87/250] - Avg Loss: 0.0385
Epoch 88/250: 100%| | 570/570 [00:03<00:00, 183.06it/s]

[Feature Set: xydd_4] Epoch [88/250] - Avg Loss: 0.0854
Epoch 89/250: 100%| | 570/570 [00:03<00:00, 178.87it/s]

[Feature Set: xydd_4] Epoch [89/250] - Avg Loss: 0.0361
Epoch 90/250: 100%| | 570/570 [00:03<00:00, 181.84it/s]

[Feature Set: xydd_4] Epoch [90/250] - Avg Loss: 0.0271
Epoch 91/250: 100%| | 570/570 [00:03<00:00, 182.48it/s]

[Feature Set: xydd_4] Epoch [91/250] - Avg Loss: 0.0826
Epoch 92/250: 100%| | 570/570 [00:03<00:00, 182.33it/s]

[Feature Set: xydd_4] Epoch [92/250] - Avg Loss: 0.1668
Epoch 93/250: 100%| | 570/570 [00:03<00:00, 183.64it/s]

[Feature Set: xydd_4] Epoch [93/250] - Avg Loss: 0.0954
Epoch 94/250: 100%| | 570/570 [00:03<00:00, 181.52it/s]

[Feature Set: xydd_4] Epoch [94/250] - Avg Loss: 0.0601
Epoch 95/250: 100%| | 570/570 [00:03<00:00, 182.94it/s]

[Feature Set: xydd_4] Epoch [95/250] - Avg Loss: 0.0475
Epoch 96/250: 100%| | 570/570 [00:03<00:00, 182.07it/s]

[Feature Set: xydd_4] Epoch [96/250] - Avg Loss: 0.0560
Epoch 97/250: 100%| | 570/570 [00:03<00:00, 181.09it/s]

[Feature Set: xydd_4] Epoch [97/250] - Avg Loss: 0.0324
Epoch 98/250: 100%| | 570/570 [00:03<00:00, 174.67it/s]

[Feature Set: xydd_4] Epoch [98/250] - Avg Loss: 0.0951
Epoch 99/250: 100%| | 570/570 [00:03<00:00, 182.45it/s]

[Feature Set: xydd_4] Epoch [99/250] - Avg Loss: 0.0949
Epoch 100/250: 100%| | 570/570 [00:03<00:00, 184.09it/s]

[Feature Set: xydd_4] Epoch [100/250] - Avg Loss: 0.0561
Epoch 101/250: 100%| | 570/570 [00:03<00:00, 181.74it/s]

[Feature Set: xydd_4] Epoch [101/250] - Avg Loss: 0.0293
Epoch 102/250: 100%| | 570/570 [00:03<00:00, 184.23it/s]

[Feature Set: xydd_4] Epoch [102/250] - Avg Loss: 0.0575
Epoch 103/250: 100%| | 570/570 [00:03<00:00, 181.90it/s]

[Feature Set: xydd_4] Epoch [103/250] - Avg Loss: 0.0729
Epoch 104/250: 100%| | 570/570 [00:03<00:00, 181.59it/s]

[Feature Set: xydd_4] Epoch [104/250] - Avg Loss: 0.0487
Epoch 105/250: 100%| | 570/570 [00:03<00:00, 183.40it/s]

[Feature Set: xydd_4] Epoch [105/250] - Avg Loss: 0.0171
Epoch 106/250: 100%| | 570/570 [00:03<00:00, 182.96it/s]

[Feature Set: xydd_4] Epoch [106/250] - Avg Loss: 0.0331
Epoch 107/250: 100%| | 570/570 [00:03<00:00, 184.72it/s]

[Feature Set: xydd_4] Epoch [107/250] - Avg Loss: 0.1194
Epoch 108/250: 100%| | 570/570 [00:03<00:00, 183.82it/s]

[Feature Set: xydd_4] Epoch [108/250] - Avg Loss: 0.1025
Epoch 109/250: 100%| | 570/570 [00:03<00:00, 179.54it/s]

[Feature Set: xydd_4] Epoch [109/250] - Avg Loss: 0.0276
Epoch 110/250: 100%| | 570/570 [00:03<00:00, 183.82it/s]

[Feature Set: xydd_4] Epoch [110/250] - Avg Loss: 0.0409
Epoch 111/250: 100%| | 570/570 [00:03<00:00, 181.99it/s]

[Feature Set: xydd_4] Epoch [111/250] - Avg Loss: 0.0348
Epoch 112/250: 100%| | 570/570 [00:03<00:00, 182.40it/s]

[Feature Set: xydd_4] Epoch [112/250] - Avg Loss: 0.0930
Epoch 113/250: 100%| | 570/570 [00:03<00:00, 181.47it/s]

[Feature Set: xydd_4] Epoch [113/250] - Avg Loss: 0.0825
Epoch 114/250: 100%| | 570/570 [00:03<00:00, 183.94it/s]

[Feature Set: xydd_4] Epoch [114/250] - Avg Loss: 0.0323
Epoch 115/250: 100%| | 570/570 [00:03<00:00, 182.85it/s]

[Feature Set: xydd_4] Epoch [115/250] - Avg Loss: 0.0666
Epoch 116/250: 100%| | 570/570 [00:03<00:00, 183.35it/s]

[Feature Set: xydd_4] Epoch [116/250] - Avg Loss: 0.0760
Epoch 117/250: 100%| | 570/570 [00:03<00:00, 184.29it/s]

[Feature Set: xydd_4] Epoch [117/250] - Avg Loss: 0.0415
Epoch 118/250: 100%| | 570/570 [00:03<00:00, 183.43it/s]

[Feature Set: xydd_4] Epoch [118/250] - Avg Loss: 0.0660
Epoch 119/250: 100%| | 570/570 [00:03<00:00, 182.63it/s]

[Feature Set: xydd_4] Epoch [119/250] - Avg Loss: 0.0878
Epoch 120/250: 100%| | 570/570 [00:03<00:00, 180.67it/s]

[Feature Set: xydd_4] Epoch [120/250] - Avg Loss: 0.0614
Epoch 121/250: 100%| | 570/570 [00:03<00:00, 181.75it/s]

[Feature Set: xydd_4] Epoch [121/250] - Avg Loss: 0.0521
Epoch 122/250: 100%| | 570/570 [00:03<00:00, 182.13it/s]

[Feature Set: xydd_4] Epoch [122/250] - Avg Loss: 0.0500
Epoch 123/250: 100%| | 570/570 [00:03<00:00, 182.27it/s]

[Feature Set: xydd_4] Epoch [123/250] - Avg Loss: 0.0415
Epoch 124/250: 100%| | 570/570 [00:03<00:00, 181.00it/s]

[Feature Set: xydd_4] Epoch [124/250] - Avg Loss: 0.0335
Epoch 125/250: 100%| | 570/570 [00:03<00:00, 181.69it/s]

[Feature Set: xydd_4] Epoch [125/250] - Avg Loss: 0.0149
Epoch 126/250: 100%| | 570/570 [00:03<00:00, 182.28it/s]

[Feature Set: xydd_4] Epoch [126/250] - Avg Loss: 0.0203
Epoch 127/250: 100%| | 570/570 [00:03<00:00, 182.40it/s]

[Feature Set: xydd_4] Epoch [127/250] - Avg Loss: 0.0773
Epoch 128/250: 100%| | 570/570 [00:03<00:00, 182.29it/s]

[Feature Set: xydd_4] Epoch [128/250] - Avg Loss: 0.0814
Epoch 129/250: 100%| | 570/570 [00:03<00:00, 182.80it/s]

[Feature Set: xydd_4] Epoch [129/250] - Avg Loss: 0.0777
Epoch 130/250: 100%| | 570/570 [00:03<00:00, 181.01it/s]

[Feature Set: xydd_4] Epoch [130/250] - Avg Loss: 0.0377
Epoch 131/250: 100%| | 570/570 [00:03<00:00, 180.98it/s]

[Feature Set: xydd_4] Epoch [131/250] - Avg Loss: 0.0158
Epoch 132/250: 100%| | 570/570 [00:03<00:00, 183.10it/s]

[Feature Set: xydd_4] Epoch [132/250] - Avg Loss: 0.0091
Epoch 133/250: 100%| | 570/570 [00:03<00:00, 181.14it/s]

[Feature Set: xydd_4] Epoch [133/250] - Avg Loss: 0.0784
Epoch 134/250: 100%| | 570/570 [00:03<00:00, 182.59it/s]

[Feature Set: xydd_4] Epoch [134/250] - Avg Loss: 0.0667
Epoch 135/250: 100%| | 570/570 [00:03<00:00, 182.16it/s]

[Feature Set: xydd_4] Epoch [135/250] - Avg Loss: 0.0605
Epoch 136/250: 100%| | 570/570 [00:03<00:00, 178.93it/s]

[Feature Set: xydd_4] Epoch [136/250] - Avg Loss: 0.0509
Epoch 137/250: 100%| | 570/570 [00:03<00:00, 180.80it/s]

[Feature Set: xydd_4] Epoch [137/250] - Avg Loss: 0.0325
Epoch 138/250: 100%| | 570/570 [00:03<00:00, 183.52it/s]

[Feature Set: xydd_4] Epoch [138/250] - Avg Loss: 0.0901
Epoch 139/250: 100%| | 570/570 [00:03<00:00, 181.84it/s]

[Feature Set: xydd_4] Epoch [139/250] - Avg Loss: 0.0385
Epoch 140/250: 100%| | 570/570 [00:03<00:00, 182.15it/s]

[Feature Set: xydd_4] Epoch [140/250] - Avg Loss: 0.0160
Epoch 141/250: 100%| | 570/570 [00:03<00:00, 183.66it/s]

[Feature Set: xydd_4] Epoch [141/250] - Avg Loss: 0.0178
Epoch 142/250: 100%| | 570/570 [00:03<00:00, 181.47it/s]

[Feature Set: xydd_4] Epoch [142/250] - Avg Loss: 0.0219
Epoch 143/250: 100%| | 570/570 [00:03<00:00, 183.14it/s]

[Feature Set: xydd_4] Epoch [143/250] - Avg Loss: 0.0197
Epoch 144/250: 100%| | 570/570 [00:03<00:00, 180.82it/s]

[Feature Set: xydd_4] Epoch [144/250] - Avg Loss: 0.0866
Epoch 145/250: 100%| | 570/570 [00:03<00:00, 183.43it/s]

[Feature Set: xydd_4] Epoch [145/250] - Avg Loss: 0.0737
Epoch 146/250: 100%| | 570/570 [00:03<00:00, 182.29it/s]

[Feature Set: xydd_4] Epoch [146/250] - Avg Loss: 0.0230
Epoch 147/250: 100%| | 570/570 [00:03<00:00, 176.57it/s]

[Feature Set: xydd_4] Epoch [147/250] - Avg Loss: 0.0324
Epoch 148/250: 100%| | 570/570 [00:03<00:00, 183.64it/s]

[Feature Set: xydd_4] Epoch [148/250] - Avg Loss: 0.0767
Epoch 149/250: 100%| | 570/570 [00:03<00:00, 182.75it/s]

[Feature Set: xydd_4] Epoch [149/250] - Avg Loss: 0.0256
Epoch 150/250: 100%| | 570/570 [00:03<00:00, 179.51it/s]

[Feature Set: xydd_4] Epoch [150/250] - Avg Loss: 0.0205
Epoch 151/250: 100%| | 570/570 [00:03<00:00, 184.16it/s]

[Feature Set: xydd_4] Epoch [151/250] - Avg Loss: 0.0380
Epoch 152/250: 100%| | 570/570 [00:03<00:00, 182.08it/s]

[Feature Set: xydd_4] Epoch [152/250] - Avg Loss: 0.0285
Epoch 153/250: 100%| | 570/570 [00:03<00:00, 177.36it/s]

[Feature Set: xydd_4] Epoch [153/250] - Avg Loss: 0.0431
Epoch 154/250: 100%| | 570/570 [00:03<00:00, 183.18it/s]

[Feature Set: xydd_4] Epoch [154/250] - Avg Loss: 0.0360
Epoch 155/250: 100%| | 570/570 [00:03<00:00, 173.60it/s]

[Feature Set: xydd_4] Epoch [155/250] - Avg Loss: 0.0922
Epoch 156/250: 100%| | 570/570 [00:03<00:00, 170.66it/s]

[Feature Set: xydd_4] Epoch [156/250] - Avg Loss: 0.0650
Epoch 157/250: 100%| | 570/570 [00:03<00:00, 176.34it/s]

[Feature Set: xydd_4] Epoch [157/250] - Avg Loss: 0.0078
Epoch 158/250: 100%| | 570/570 [00:03<00:00, 164.31it/s]

[Feature Set: xydd_4] Epoch [158/250] - Avg Loss: 0.0086
Epoch 159/250: 100%| | 570/570 [00:03<00:00, 177.21it/s]

[Feature Set: xydd_4] Epoch [159/250] - Avg Loss: 0.0051
Epoch 160/250: 100%| | 570/570 [00:03<00:00, 181.10it/s]

[Feature Set: xydd_4] Epoch [160/250] - Avg Loss: 0.0241
Epoch 161/250: 100%| | 570/570 [00:03<00:00, 179.27it/s]

[Feature Set: xydd_4] Epoch [161/250] - Avg Loss: 0.0460
Epoch 162/250: 100%| | 570/570 [00:03<00:00, 180.67it/s]

[Feature Set: xydd_4] Epoch [162/250] - Avg Loss: 0.0284
Epoch 163/250: 100%| | 570/570 [00:03<00:00, 174.26it/s]

[Feature Set: xydd_4] Epoch [163/250] - Avg Loss: 0.0434
Epoch 164/250: 100%| | 570/570 [00:03<00:00, 181.81it/s]

[Feature Set: xydd_4] Epoch [164/250] - Avg Loss: 0.0389
Epoch 165/250: 100%| | 570/570 [00:03<00:00, 184.04it/s]

[Feature Set: xydd_4] Epoch [165/250] - Avg Loss: 0.0686
Epoch 166/250: 100%| | 570/570 [00:03<00:00, 180.33it/s]

[Feature Set: xydd_4] Epoch [166/250] - Avg Loss: 0.0566
Epoch 167/250: 100%| | 570/570 [00:03<00:00, 181.84it/s]

[Feature Set: xydd_4] Epoch [167/250] - Avg Loss: 0.0358
Epoch 168/250: 100%| | 570/570 [00:03<00:00, 184.03it/s]

[Feature Set: xydd_4] Epoch [168/250] - Avg Loss: 0.0374
Epoch 169/250: 100%| | 570/570 [00:03<00:00, 180.28it/s]

[Feature Set: xydd_4] Epoch [169/250] - Avg Loss: 0.0973
Epoch 170/250: 100%| | 570/570 [00:03<00:00, 170.80it/s]

[Feature Set: xydd_4] Epoch [170/250] - Avg Loss: 0.0613
Epoch 171/250: 100%| | 570/570 [00:03<00:00, 181.46it/s]

[Feature Set: xydd_4] Epoch [171/250] - Avg Loss: 0.0206
Epoch 172/250: 100%| | 570/570 [00:03<00:00, 179.19it/s]

[Feature Set: xydd_4] Epoch [172/250] - Avg Loss: 0.0779
Epoch 173/250: 100%| | 570/570 [00:03<00:00, 174.55it/s]

[Feature Set: xydd_4] Epoch [173/250] - Avg Loss: 0.0754
Epoch 174/250: 100%| | 570/570 [00:03<00:00, 183.18it/s]

[Feature Set: xydd_4] Epoch [174/250] - Avg Loss: 0.0246
Epoch 175/250: 100%| | 570/570 [00:03<00:00, 184.72it/s]

[Feature Set: xydd_4] Epoch [175/250] - Avg Loss: 0.0349
Epoch 176/250: 100%| | 570/570 [00:03<00:00, 182.72it/s]

[Feature Set: xydd_4] Epoch [176/250] - Avg Loss: 0.0263
Epoch 177/250: 100%| | 570/570 [00:03<00:00, 180.81it/s]

[Feature Set: xydd_4] Epoch [177/250] - Avg Loss: 0.0586
Epoch 178/250: 100%| | 570/570 [00:03<00:00, 184.04it/s]

[Feature Set: xydd_4] Epoch [178/250] - Avg Loss: 0.0386
Epoch 179/250: 100%| | 570/570 [00:03<00:00, 182.32it/s]

[Feature Set: xydd_4] Epoch [179/250] - Avg Loss: 0.0173
Epoch 180/250: 100%| | 570/570 [00:03<00:00, 182.14it/s]

[Feature Set: xydd_4] Epoch [180/250] - Avg Loss: 0.0088
Epoch 181/250: 100%| | 570/570 [00:03<00:00, 183.70it/s]

[Feature Set: xydd_4] Epoch [181/250] - Avg Loss: 0.0798
Epoch 182/250: 100%| | 570/570 [00:03<00:00, 182.66it/s]

[Feature Set: xydd_4] Epoch [182/250] - Avg Loss: 0.0369
Epoch 183/250: 100%| | 570/570 [00:03<00:00, 182.72it/s]

[Feature Set: xydd_4] Epoch [183/250] - Avg Loss: 0.0724
Epoch 184/250: 100%| | 570/570 [00:03<00:00, 181.90it/s]

[Feature Set: xydd_4] Epoch [184/250] - Avg Loss: 0.0286
Epoch 185/250: 100%| | 570/570 [00:03<00:00, 182.27it/s]

[Feature Set: xydd_4] Epoch [185/250] - Avg Loss: 0.0187
Epoch 186/250: 100%| | 570/570 [00:03<00:00, 184.71it/s]

[Feature Set: xydd_4] Epoch [186/250] - Avg Loss: 0.0231
Epoch 187/250: 100%| | 570/570 [00:03<00:00, 182.72it/s]

[Feature Set: xydd_4] Epoch [187/250] - Avg Loss: 0.0204
Epoch 188/250: 100%| | 570/570 [00:03<00:00, 184.19it/s]

[Feature Set: xydd_4] Epoch [188/250] - Avg Loss: 0.0206
Epoch 189/250: 100%| | 570/570 [00:03<00:00, 181.86it/s]

[Feature Set: xydd_4] Epoch [189/250] - Avg Loss: 0.0413
Epoch 190/250: 100%| | 570/570 [00:03<00:00, 182.20it/s]

[Feature Set: xydd_4] Epoch [190/250] - Avg Loss: 0.0479
Epoch 191/250: 100%| | 570/570 [00:03<00:00, 184.28it/s]

[Feature Set: xydd_4] Epoch [191/250] - Avg Loss: 0.0262
Epoch 192/250: 100%| | 570/570 [00:03<00:00, 182.34it/s]

[Feature Set: xydd_4] Epoch [192/250] - Avg Loss: 0.0457
Epoch 193/250: 100%| | 570/570 [00:03<00:00, 181.39it/s]

[Feature Set: xydd_4] Epoch [193/250] - Avg Loss: 0.0566
Epoch 194/250: 100%| | 570/570 [00:03<00:00, 182.90it/s]

[Feature Set: xydd_4] Epoch [194/250] - Avg Loss: 0.0470
Epoch 195/250: 100%| | 570/570 [00:03<00:00, 183.53it/s]

[Feature Set: xydd_4] Epoch [195/250] - Avg Loss: 0.0380
Epoch 196/250: 100%| | 570/570 [00:03<00:00, 182.43it/s]

[Feature Set: xydd_4] Epoch [196/250] - Avg Loss: 0.0074
Epoch 197/250: 100%| | 570/570 [00:03<00:00, 183.48it/s]

[Feature Set: xydd_4] Epoch [197/250] - Avg Loss: 0.0071
Epoch 198/250: 100%| | 570/570 [00:03<00:00, 181.98it/s]

[Feature Set: xydd_4] Epoch [198/250] - Avg Loss: 0.0089
Epoch 199/250: 100%| | 570/570 [00:03<00:00, 182.32it/s]

[Feature Set: xydd_4] Epoch [199/250] - Avg Loss: 0.0031
Epoch 200/250: 100%| | 570/570 [00:03<00:00, 181.70it/s]

[Feature Set: xydd_4] Epoch [200/250] - Avg Loss: 0.0253
Epoch 201/250: 100%| | 570/570 [00:03<00:00, 181.68it/s]

[Feature Set: xydd_4] Epoch [201/250] - Avg Loss: 0.0335
Epoch 202/250: 100%| | 570/570 [00:03<00:00, 181.92it/s]

[Feature Set: xydd_4] Epoch [202/250] - Avg Loss: 0.0351
Epoch 203/250: 100%| | 570/570 [00:03<00:00, 183.38it/s]

[Feature Set: xydd_4] Epoch [203/250] - Avg Loss: 0.0138
Epoch 204/250: 100%| | 570/570 [00:03<00:00, 182.88it/s]

[Feature Set: xydd_4] Epoch [204/250] - Avg Loss: 0.0044
Epoch 205/250: 100%| | 570/570 [00:03<00:00, 181.81it/s]

[Feature Set: xydd_4] Epoch [205/250] - Avg Loss: 0.0024
Epoch 206/250: 100%| | 570/570 [00:03<00:00, 183.65it/s]

[Feature Set: xydd_4] Epoch [206/250] - Avg Loss: 0.0583
Epoch 207/250: 100%| | 570/570 [00:03<00:00, 183.11it/s]

[Feature Set: xydd_4] Epoch [207/250] - Avg Loss: 0.0226
Epoch 208/250: 100%| | 570/570 [00:03<00:00, 181.61it/s]

[Feature Set: xydd_4] Epoch [208/250] - Avg Loss: 0.0794
Epoch 209/250: 100%| | 570/570 [00:03<00:00, 180.78it/s]

[Feature Set: xydd_4] Epoch [209/250] - Avg Loss: 0.0333
Epoch 210/250: 100%| | 570/570 [00:03<00:00, 182.27it/s]

[Feature Set: xydd_4] Epoch [210/250] - Avg Loss: 0.0093
Epoch 211/250: 100%| | 570/570 [00:03<00:00, 182.13it/s]

[Feature Set: xydd_4] Epoch [211/250] - Avg Loss: 0.0193
Epoch 212/250: 100%| | 570/570 [00:03<00:00, 184.19it/s]

[Feature Set: xydd_4] Epoch [212/250] - Avg Loss: 0.0797
Epoch 213/250: 100%| | 570/570 [00:03<00:00, 181.93it/s]

[Feature Set: xydd_4] Epoch [213/250] - Avg Loss: 0.0182
Epoch 214/250: 100%| | 570/570 [00:03<00:00, 183.00it/s]

[Feature Set: xydd_4] Epoch [214/250] - Avg Loss: 0.0321
Epoch 215/250: 100%| | 570/570 [00:03<00:00, 184.23it/s]

[Feature Set: xydd_4] Epoch [215/250] - Avg Loss: 0.0225
Epoch 216/250: 100%| | 570/570 [00:03<00:00, 182.43it/s]

[Feature Set: xydd_4] Epoch [216/250] - Avg Loss: 0.0473
Epoch 217/250: 100%| | 570/570 [00:03<00:00, 179.09it/s]

[Feature Set: xydd_4] Epoch [217/250] - Avg Loss: 0.1055
Epoch 218/250: 100%| | 570/570 [00:03<00:00, 184.88it/s]

[Feature Set: xydd_4] Epoch [218/250] - Avg Loss: 0.0509
Epoch 219/250: 100%| | 570/570 [00:03<00:00, 182.17it/s]

[Feature Set: xydd_4] Epoch [219/250] - Avg Loss: 0.0294
Epoch 220/250: 100%| | 570/570 [00:03<00:00, 181.42it/s]

[Feature Set: xydd_4] Epoch [220/250] - Avg Loss: 0.0209
Epoch 221/250: 100%| | 570/570 [00:03<00:00, 183.38it/s]

[Feature Set: xydd_4] Epoch [221/250] - Avg Loss: 0.0340
Epoch 222/250: 100%| | 570/570 [00:03<00:00, 182.27it/s]

[Feature Set: xydd_4] Epoch [222/250] - Avg Loss: 0.0182
Epoch 223/250: 100%| | 570/570 [00:03<00:00, 182.46it/s]

[Feature Set: xydd_4] Epoch [223/250] - Avg Loss: 0.0386
Epoch 224/250: 100%| | 570/570 [00:03<00:00, 183.85it/s]

[Feature Set: xydd_4] Epoch [224/250] - Avg Loss: 0.0268
Epoch 225/250: 100%| | 570/570 [00:03<00:00, 182.68it/s]

[Feature Set: xydd_4] Epoch [225/250] - Avg Loss: 0.0205
Epoch 226/250: 100%| | 570/570 [00:03<00:00, 180.00it/s]

[Feature Set: xydd_4] Epoch [226/250] - Avg Loss: 0.0404
Epoch 227/250: 100%| | 570/570 [00:03<00:00, 182.42it/s]

[Feature Set: xydd_4] Epoch [227/250] - Avg Loss: 0.0841
Epoch 228/250: 100%| | 570/570 [00:03<00:00, 183.66it/s]

[Feature Set: xydd_4] Epoch [228/250] - Avg Loss: 0.0518
Epoch 229/250: 100%| | 570/570 [00:03<00:00, 182.40it/s]

[Feature Set: xydd_4] Epoch [229/250] - Avg Loss: 0.0149
Epoch 230/250: 100%| | 570/570 [00:03<00:00, 182.52it/s]

[Feature Set: xydd_4] Epoch [230/250] - Avg Loss: 0.0092
Epoch 231/250: 100%| | 570/570 [00:03<00:00, 182.76it/s]

[Feature Set: xydd_4] Epoch [231/250] - Avg Loss: 0.0090
Epoch 232/250: 100%| | 570/570 [00:03<00:00, 183.07it/s]

[Feature Set: xydd_4] Epoch [232/250] - Avg Loss: 0.0452
Epoch 233/250: 100%| | 570/570 [00:03<00:00, 181.93it/s]

[Feature Set: xydd_4] Epoch [233/250] - Avg Loss: 0.0351
Epoch 234/250: 100%| | 570/570 [00:03<00:00, 167.42it/s]

[Feature Set: xydd_4] Epoch [234/250] - Avg Loss: 0.0418
Epoch 235/250: 100%| | 570/570 [00:03<00:00, 181.59it/s]

[Feature Set: xydd_4] Epoch [235/250] - Avg Loss: 0.0501
Epoch 236/250: 100%| | 570/570 [00:03<00:00, 183.40it/s]

[Feature Set: xydd_4] Epoch [236/250] - Avg Loss: 0.0080
Epoch 237/250: 100%| | 570/570 [00:03<00:00, 182.80it/s]

[Feature Set: xydd_4] Epoch [237/250] - Avg Loss: 0.0084
Epoch 238/250: 100%| | 570/570 [00:03<00:00, 181.89it/s]

[Feature Set: xydd_4] Epoch [238/250] - Avg Loss: 0.0105
Epoch 239/250: 100%| | 570/570 [00:03<00:00, 182.43it/s]

[Feature Set: xydd_4] Epoch [239/250] - Avg Loss: 0.1054
Epoch 240/250: 100%| | 570/570 [00:03<00:00, 180.74it/s]

[Feature Set: xydd_4] Epoch [240/250] - Avg Loss: 0.0365
Epoch 241/250: 100%| | 570/570 [00:03<00:00, 183.80it/s]

[Feature Set: xydd_4] Epoch [241/250] - Avg Loss: 0.0185
Epoch 242/250: 100%| | 570/570 [00:03<00:00, 181.95it/s]

[Feature Set: xydd_4] Epoch [242/250] - Avg Loss: 0.0270
Epoch 243/250: 100%| | 570/570 [00:03<00:00, 182.50it/s]

[Feature Set: xydd_4] Epoch [243/250] - Avg Loss: 0.0249
Epoch 244/250: 100%| | 570/570 [00:03<00:00, 183.89it/s]

[Feature Set: xydd_4] Epoch [244/250] - Avg Loss: 0.0136
Epoch 245/250: 100%| | 570/570 [00:03<00:00, 182.40it/s]

[Feature Set: xydd_4] Epoch [245/250] - Avg Loss: 0.0130
Epoch 246/250: 100%| | 570/570 [00:03<00:00, 181.84it/s]

[Feature Set: xydd_4] Epoch [246/250] - Avg Loss: 0.0090
Epoch 247/250: 100%| | 570/570 [00:03<00:00, 181.38it/s]

[Feature Set: xydd_4] Epoch [247/250] - Avg Loss: 0.0062
Epoch 248/250: 100%| | 570/570 [00:03<00:00, 180.61it/s]

[Feature Set: xydd_4] Epoch [248/250] - Avg Loss: 0.0169
Epoch 249/250: 100%| | 570/570 [00:03<00:00, 182.50it/s]

[Feature Set: xydd_4] Epoch [249/250] - Avg Loss: 0.0724
Epoch 250/250: 100%| | 570/570 [00:03<00:00, 181.87it/s]

[Feature Set: xydd_4] Epoch [250/250] - Avg Loss: 0.0661
[Eval] xydd_4: 100%| | 143/143 [00:00<00:00, 331.96it/s]
Epoch 1/250: 100%| | 570/570 [00:03<00:00, 185.19it/s]

[Feature Set: xyddsc_5] Epoch [1/250] - Avg Loss: 0.6770
Epoch 2/250: 100%| | 570/570 [00:03<00:00, 185.20it/s]

[Feature Set: xyddsc_5] Epoch [2/250] - Avg Loss: 0.6660
Epoch 3/250: 100%| | 570/570 [00:03<00:00, 183.70it/s]

[Feature Set: xyddsc_5] Epoch [3/250] - Avg Loss: 0.6598
Epoch 4/250: 100%| | 570/570 [00:03<00:00, 185.69it/s]

[Feature Set: xyddsc_5] Epoch [4/250] - Avg Loss: 0.6534
Epoch 5/250: 100%| | 570/570 [00:03<00:00, 185.33it/s]

[Feature Set: xyddsc_5] Epoch [5/250] - Avg Loss: 0.6356
Epoch 6/250: 100%| | 570/570 [00:03<00:00, 186.07it/s]

[Feature Set: xyddsc_5] Epoch [6/250] - Avg Loss: 0.6108
Epoch 7/250: 100%| | 570/570 [00:03<00:00, 184.25it/s]

[Feature Set: xyddsc_5] Epoch [7/250] - Avg Loss: 0.5943
Epoch 8/250: 100%| | 570/570 [00:03<00:00, 185.73it/s]

[Feature Set: xyddsc_5] Epoch [8/250] - Avg Loss: 0.5743
Epoch 9/250: 100%| | 570/570 [00:03<00:00, 185.49it/s]

[Feature Set: xyddsc_5] Epoch [9/250] - Avg Loss: 0.5480
Epoch 10/250: 100%| | 570/570 [00:03<00:00, 185.24it/s]

[Feature Set: xyddsc_5] Epoch [10/250] - Avg Loss: 0.5288
Epoch 11/250: 100%| | 570/570 [00:03<00:00, 183.62it/s]

[Feature Set: xyddsc_5] Epoch [11/250] - Avg Loss: 0.4992

Epoch 12/250: 100%| | 570/570 [00:03<00:00, 185.17it/s]

[Feature Set: xydsc_5] Epoch [12/250] - Avg Loss: 0.4815

Epoch 13/250: 100%| | 570/570 [00:03<00:00, 185.30it/s]

[Feature Set: xydsc_5] Epoch [13/250] - Avg Loss: 0.4612

Epoch 14/250: 100%| | 570/570 [00:03<00:00, 183.44it/s]

[Feature Set: xydsc_5] Epoch [14/250] - Avg Loss: 0.4295

Epoch 15/250: 100%| | 570/570 [00:03<00:00, 183.54it/s]

[Feature Set: xydsc_5] Epoch [15/250] - Avg Loss: 0.4318

Epoch 16/250: 100%| | 570/570 [00:03<00:00, 185.53it/s]

[Feature Set: xydsc_5] Epoch [16/250] - Avg Loss: 0.3942

Epoch 17/250: 100%| | 570/570 [00:03<00:00, 185.66it/s]

[Feature Set: xydsc_5] Epoch [17/250] - Avg Loss: 0.3796

Epoch 18/250: 100%| | 570/570 [00:03<00:00, 185.03it/s]

[Feature Set: xydsc_5] Epoch [18/250] - Avg Loss: 0.3738

Epoch 19/250: 100%| | 570/570 [00:03<00:00, 177.53it/s]

[Feature Set: xydsc_5] Epoch [19/250] - Avg Loss: 0.3486

Epoch 20/250: 100%| | 570/570 [00:03<00:00, 185.01it/s]

[Feature Set: xydsc_5] Epoch [20/250] - Avg Loss: 0.3441

Epoch 21/250: 100%| | 570/570 [00:03<00:00, 185.27it/s]

[Feature Set: xydsc_5] Epoch [21/250] - Avg Loss: 0.3354

Epoch 22/250: 100%| | 570/570 [00:03<00:00, 183.32it/s]

[Feature Set: xydsc_5] Epoch [22/250] - Avg Loss: 0.3304

Epoch 23/250: 100%| | 570/570 [00:03<00:00, 183.98it/s]

[Feature Set: xydsc_5] Epoch [23/250] - Avg Loss: 0.3069

Epoch 24/250: 100%| | 570/570 [00:03<00:00, 185.95it/s]

[Feature Set: xydsc_5] Epoch [24/250] - Avg Loss: 0.2852

Epoch 25/250: 100%| | 570/570 [00:03<00:00, 185.82it/s]

[Feature Set: xydsc_5] Epoch [25/250] - Avg Loss: 0.2812

Epoch 26/250: 100%| | 570/570 [00:03<00:00, 185.66it/s]

[Feature Set: xydsc_5] Epoch [26/250] - Avg Loss: 0.2776

Epoch 27/250: 100%| | 570/570 [00:03<00:00, 184.39it/s]

[Feature Set: xydsc_5] Epoch [27/250] - Avg Loss: 0.2575

Epoch 28/250: 100%| | 570/570 [00:03<00:00, 185.99it/s]

[Feature Set: xydsc_5] Epoch [28/250] - Avg Loss: 0.2582

Epoch 29/250: 100%| | 570/570 [00:03<00:00, 185.19it/s]

[Feature Set: xydsc_5] Epoch [29/250] - Avg Loss: 0.2473

Epoch 30/250: 100%| | 570/570 [00:03<00:00, 185.30it/s]

[Feature Set: xydsc_5] Epoch [30/250] - Avg Loss: 0.2492

Epoch 31/250: 100%| | 570/570 [00:03<00:00, 183.77it/s]

[Feature Set: xydsc_5] Epoch [31/250] - Avg Loss: 0.2156

Epoch 32/250: 100%| | 570/570 [00:03<00:00, 182.67it/s]

[Feature Set: xydsc_5] Epoch [32/250] - Avg Loss: 0.2167

Epoch 33/250: 100%| | 570/570 [00:03<00:00, 185.23it/s]

[Feature Set: xydsc_5] Epoch [33/250] - Avg Loss: 0.2284

Epoch 34/250: 100%| | 570/570 [00:03<00:00, 185.77it/s]

[Feature Set: xydsc_5] Epoch [34/250] - Avg Loss: 0.2179

Epoch 35/250: 100%| | 570/570 [00:03<00:00, 184.06it/s]

[Feature Set: xydsc_5] Epoch [35/250] - Avg Loss: 0.1837

Epoch 36/250: 100%| | 570/570 [00:03<00:00, 184.50it/s]

[Feature Set: xydsc_5] Epoch [36/250] - Avg Loss: 0.1728

Epoch 37/250: 100%| | 570/570 [00:03<00:00, 185.14it/s]

[Feature Set: xydsc_5] Epoch [37/250] - Avg Loss: 0.1988

Epoch 38/250: 100%| | 570/570 [00:03<00:00, 185.33it/s]

[Feature Set: xydsc_5] Epoch [38/250] - Avg Loss: 0.2762

Epoch 39/250: 100%| | 570/570 [00:03<00:00, 182.87it/s]

[Feature Set: xydsc_5] Epoch [39/250] - Avg Loss: 0.1636

Epoch 40/250: 100%| | 570/570 [00:03<00:00, 172.85it/s]

[Feature Set: xydsc_5] Epoch [40/250] - Avg Loss: 0.1712

Epoch 41/250: 100%| | 570/570 [00:03<00:00, 184.67it/s]

[Feature Set: xydsc_5] Epoch [41/250] - Avg Loss: 0.1557

Epoch 42/250: 100%| | 570/570 [00:03<00:00, 183.22it/s]

[Feature Set: xydsc_5] Epoch [42/250] - Avg Loss: 0.1809

Epoch 43/250: 100%| | 570/570 [00:03<00:00, 184.45it/s]

[Feature Set: xydsc_5] Epoch [43/250] - Avg Loss: 0.1635

Epoch 44/250: 100%| | 570/570 [00:03<00:00, 185.64it/s]

[Feature Set: xydsc_5] Epoch [44/250] - Avg Loss: 0.1401

Epoch 45/250: 100%| | 570/570 [00:03<00:00, 185.44it/s]

[Feature Set: xydsc_5] Epoch [45/250] - Avg Loss: 0.1448

Epoch 46/250: 100%| | 570/570 [00:03<00:00, 184.19it/s]

[Feature Set: xydsc_5] Epoch [46/250] - Avg Loss: 0.1391

Epoch 47/250: 100%| | 570/570 [00:03<00:00, 185.83it/s]

[Feature Set: xydsc_5] Epoch [47/250] - Avg Loss: 0.2043

Epoch 48/250: 100%| | 570/570 [00:03<00:00, 185.04it/s]

[Feature Set: xydsc_5] Epoch [48/250] - Avg Loss: 0.1669

Epoch 49/250: 100%| | 570/570 [00:03<00:00, 185.13it/s]

[Feature Set: xydsc_5] Epoch [49/250] - Avg Loss: 0.1129

Epoch 50/250: 100%| | 570/570 [00:03<00:00, 183.46it/s]

[Feature Set: xydsc_5] Epoch [50/250] - Avg Loss: 0.1899

Epoch 51/250: 100%| | 570/570 [00:03<00:00, 184.48it/s]

[Feature Set: xydsc_5] Epoch [51/250] - Avg Loss: 0.1378

Epoch 52/250: 100%| | 570/570 [00:03<00:00, 184.93it/s]

[Feature Set: xydsc_5] Epoch [52/250] - Avg Loss: 0.0981

Epoch 53/250: 100%| | 570/570 [00:03<00:00, 183.57it/s]

[Feature Set: xydsc_5] Epoch [53/250] - Avg Loss: 0.1164

Epoch 54/250: 100%| | 570/570 [00:03<00:00, 183.62it/s]

[Feature Set: xydsc_5] Epoch [54/250] - Avg Loss: 0.1262

Epoch 55/250: 100%| | 570/570 [00:03<00:00, 185.14it/s]

[Feature Set: xydsc_5] Epoch [55/250] - Avg Loss: 0.1693

Epoch 56/250: 100%| | 570/570 [00:03<00:00, 185.62it/s]

[Feature Set: xydsc_5] Epoch [56/250] - Avg Loss: 0.1148

Epoch 57/250: 100%| | 570/570 [00:03<00:00, 184.34it/s]

[Feature Set: xydsc_5] Epoch [57/250] - Avg Loss: 0.1169

Epoch 58/250: 100%| | 570/570 [00:03<00:00, 184.70it/s]

[Feature Set: xydsc_5] Epoch [58/250] - Avg Loss: 0.1065

Epoch 59/250: 100%| | 570/570 [00:03<00:00, 185.05it/s]

[Feature Set: xydsc_5] Epoch [59/250] - Avg Loss: 0.1010

Epoch 60/250: 100%| | 570/570 [00:03<00:00, 184.59it/s]

[Feature Set: xydsc_5] Epoch [60/250] - Avg Loss: 0.1367

Epoch 61/250: 100%| | 570/570 [00:03<00:00, 183.84it/s]

[Feature Set: xydsc_5] Epoch [61/250] - Avg Loss: 0.0899

Epoch 62/250: 100%| | 570/570 [00:03<00:00, 176.10it/s]

[Feature Set: xydsc_5] Epoch [62/250] - Avg Loss: 0.1080

Epoch 63/250: 100%| | 570/570 [00:03<00:00, 182.70it/s]

[Feature Set: xydsc_5] Epoch [63/250] - Avg Loss: 0.0672

Epoch 64/250: 100%| | 570/570 [00:03<00:00, 185.32it/s]

[Feature Set: xydsc_5] Epoch [64/250] - Avg Loss: 0.1438

Epoch 65/250: 100%| | 570/570 [00:03<00:00, 183.60it/s]

[Feature Set: xydsc_5] Epoch [65/250] - Avg Loss: 0.0791

Epoch 66/250: 100%| | 570/570 [00:03<00:00, 185.71it/s]

[Feature Set: xydsc_5] Epoch [66/250] - Avg Loss: 0.0726

Epoch 67/250: 100%| | 570/570 [00:03<00:00, 184.09it/s]

[Feature Set: xydsc_5] Epoch [67/250] - Avg Loss: 0.0913

Epoch 68/250: 100%| | 570/570 [00:03<00:00, 185.02it/s]

[Feature Set: xydsc_5] Epoch [68/250] - Avg Loss: 0.0895

Epoch 69/250: 100%| | 570/570 [00:03<00:00, 177.55it/s]

[Feature Set: xydsc_5] Epoch [69/250] - Avg Loss: 0.0838

Epoch 70/250: 100%| | 570/570 [00:03<00:00, 175.86it/s]

[Feature Set: xydsc_5] Epoch [70/250] - Avg Loss: 0.0979

Epoch 71/250: 100%| | 570/570 [00:03<00:00, 184.39it/s]

[Feature Set: xydsc_5] Epoch [71/250] - Avg Loss: 0.0777

Epoch 72/250: 100%| | 570/570 [00:03<00:00, 184.47it/s]

[Feature Set: xydsc_5] Epoch [72/250] - Avg Loss: 0.0954

Epoch 73/250: 100%| | 570/570 [00:03<00:00, 182.51it/s]

[Feature Set: xydsc_5] Epoch [73/250] - Avg Loss: 0.0930

Epoch 74/250: 100%| | 570/570 [00:03<00:00, 185.83it/s]

[Feature Set: xydsc_5] Epoch [74/250] - Avg Loss: 0.0510

Epoch 75/250: 100%| | 570/570 [00:03<00:00, 184.41it/s]

[Feature Set: xydsc_5] Epoch [75/250] - Avg Loss: 0.0653

Epoch 76/250: 100%| | 570/570 [00:03<00:00, 184.86it/s]

[Feature Set: xydsc_5] Epoch [76/250] - Avg Loss: 0.0713

Epoch 77/250: 100%| | 570/570 [00:03<00:00, 183.97it/s]

[Feature Set: xydsc_5] Epoch [77/250] - Avg Loss: 0.0857

Epoch 78/250: 100%| | 570/570 [00:03<00:00, 184.93it/s]

[Feature Set: xydsc_5] Epoch [78/250] - Avg Loss: 0.0690

Epoch 79/250: 100%| | 570/570 [00:03<00:00, 184.43it/s]

[Feature Set: xydsc_5] Epoch [79/250] - Avg Loss: 0.1350

Epoch 80/250: 100%| | 570/570 [00:03<00:00, 185.07it/s]

[Feature Set: xydsc_5] Epoch [80/250] - Avg Loss: 0.0485

Epoch 81/250: 100%| | 570/570 [00:03<00:00, 182.88it/s]

[Feature Set: xydsc_5] Epoch [81/250] - Avg Loss: 0.0647

Epoch 82/250: 100%| | 570/570 [00:03<00:00, 184.31it/s]

[Feature Set: xydsc_5] Epoch [82/250] - Avg Loss: 0.0513

Epoch 83/250: 100%| | 570/570 [00:03<00:00, 185.18it/s]

[Feature Set: xydsc_5] Epoch [83/250] - Avg Loss: 0.0951

Epoch 84/250: 100%| | 570/570 [00:03<00:00, 185.58it/s]

[Feature Set: xydsc_5] Epoch [84/250] - Avg Loss: 0.0719

Epoch 85/250: 100%| | 570/570 [00:03<00:00, 183.49it/s]

[Feature Set: xydsc_5] Epoch [85/250] - Avg Loss: 0.2362

Epoch 86/250: 100%| | 570/570 [00:03<00:00, 185.43it/s]

[Feature Set: xydsc_5] Epoch [86/250] - Avg Loss: 0.1050

Epoch 87/250: 100%| | 570/570 [00:03<00:00, 185.03it/s]

[Feature Set: xydsc_5] Epoch [87/250] - Avg Loss: 0.0450

Epoch 88/250: 100%| | 570/570 [00:03<00:00, 184.88it/s]

[Feature Set: xydsc_5] Epoch [88/250] - Avg Loss: 0.0399

Epoch 89/250: 100%| | 570/570 [00:03<00:00, 183.62it/s]

[Feature Set: xydsc_5] Epoch [89/250] - Avg Loss: 0.0482

Epoch 90/250: 100%| | 570/570 [00:03<00:00, 185.36it/s]

[Feature Set: xydsc_5] Epoch [90/250] - Avg Loss: 0.1063

Epoch 91/250: 100%| | 570/570 [00:03<00:00, 185.17it/s]

[Feature Set: xydsc_5] Epoch [91/250] - Avg Loss: 0.0921

Epoch 92/250: 100%| | 570/570 [00:03<00:00, 185.44it/s]

[Feature Set: xydsc_5] Epoch [92/250] - Avg Loss: 0.0600

Epoch 93/250: 100%| | 570/570 [00:03<00:00, 183.88it/s]

[Feature Set: xydsc_5] Epoch [93/250] - Avg Loss: 0.0350

Epoch 94/250: 100%| | 570/570 [00:03<00:00, 184.81it/s]

[Feature Set: xydsc_5] Epoch [94/250] - Avg Loss: 0.0480

Epoch 95/250: 100%| | 570/570 [00:03<00:00, 185.58it/s]

[Feature Set: xydsc_5] Epoch [95/250] - Avg Loss: 0.0196

Epoch 96/250: 100%| | 570/570 [00:03<00:00, 185.24it/s]

[Feature Set: xydsc_5] Epoch [96/250] - Avg Loss: 0.1061

Epoch 97/250: 100%| | 570/570 [00:03<00:00, 180.93it/s]

[Feature Set: xydsc_5] Epoch [97/250] - Avg Loss: 0.0551

Epoch 98/250: 100%| | 570/570 [00:03<00:00, 185.06it/s]

[Feature Set: xydsc_5] Epoch [98/250] - Avg Loss: 0.0611

Epoch 99/250: 100%| | 570/570 [00:03<00:00, 185.15it/s]

[Feature Set: xydsc_5] Epoch [99/250] - Avg Loss: 0.0543

Epoch 100/250: 100%| | 570/570 [00:03<00:00, 185.17it/s]

[Feature Set: xydsc_5] Epoch [100/250] - Avg Loss: 0.0696

Epoch 101/250: 100%| | 570/570 [00:03<00:00, 184.06it/s]

[Feature Set: xydsc_5] Epoch [101/250] - Avg Loss: 0.0614

Epoch 102/250: 100%| | 570/570 [00:03<00:00, 184.83it/s]

[Feature Set: xydsc_5] Epoch [102/250] - Avg Loss: 0.0289

Epoch 103/250: 100%| | 570/570 [00:03<00:00, 169.76it/s]

[Feature Set: xydsc_5] Epoch [103/250] - Avg Loss: 0.0280

Epoch 104/250: 100%| | 570/570 [00:03<00:00, 180.08it/s]

[Feature Set: xydsc_5] Epoch [104/250] - Avg Loss: 0.0496

Epoch 105/250: 100%| | 570/570 [00:03<00:00, 170.78it/s]

[Feature Set: xydsc_5] Epoch [105/250] - Avg Loss: 0.0714

Epoch 106/250: 100%| | 570/570 [00:03<00:00, 181.25it/s]

[Feature Set: xydsc_5] Epoch [106/250] - Avg Loss: 0.1117

Epoch 107/250: 100%| | 570/570 [00:03<00:00, 179.84it/s]

[Feature Set: xydsc_5] Epoch [107/250] - Avg Loss: 0.0745

Epoch 108/250: 100%| | 570/570 [00:03<00:00, 180.99it/s]

[Feature Set: xydsc_5] Epoch [108/250] - Avg Loss: 0.0326

Epoch 109/250: 100%| | 570/570 [00:03<00:00, 183.40it/s]

[Feature Set: xydsc_5] Epoch [109/250] - Avg Loss: 0.0353

Epoch 110/250: 100%| | 570/570 [00:03<00:00, 182.17it/s]

[Feature Set: xydsc_5] Epoch [110/250] - Avg Loss: 0.0131

Epoch 111/250: 100%| | 570/570 [00:03<00:00, 181.55it/s]

[Feature Set: xydsc_5] Epoch [111/250] - Avg Loss: 0.0384

Epoch 112/250: 100%| | 570/570 [00:03<00:00, 184.55it/s]

[Feature Set: xydsc_5] Epoch [112/250] - Avg Loss: 0.0740

Epoch 113/250: 100%| | 570/570 [00:03<00:00, 183.69it/s]

[Feature Set: xydsc_5] Epoch [113/250] - Avg Loss: 0.0257

Epoch 114/250: 100%| | 570/570 [00:03<00:00, 183.60it/s]

[Feature Set: xydsc_5] Epoch [114/250] - Avg Loss: 0.0576

Epoch 115/250: 100%| | 570/570 [00:03<00:00, 178.46it/s]

[Feature Set: xydsc_5] Epoch [115/250] - Avg Loss: 0.0666

Epoch 116/250: 100%| | 570/570 [00:03<00:00, 180.74it/s]

[Feature Set: xydsc_5] Epoch [116/250] - Avg Loss: 0.0274

Epoch 117/250: 100%| | 570/570 [00:03<00:00, 180.04it/s]

[Feature Set: xydsc_5] Epoch [117/250] - Avg Loss: 0.0415

Epoch 118/250: 100%| | 570/570 [00:03<00:00, 181.78it/s]

[Feature Set: xydsc_5] Epoch [118/250] - Avg Loss: 0.0484

Epoch 119/250: 100%| | 570/570 [00:03<00:00, 183.36it/s]

[Feature Set: xydsc_5] Epoch [119/250] - Avg Loss: 0.1258

Epoch 120/250: 100%| | 570/570 [00:03<00:00, 182.17it/s]

[Feature Set: xydsc_5] Epoch [120/250] - Avg Loss: 0.0586

Epoch 121/250: 100%| | 570/570 [00:03<00:00, 184.41it/s]

[Feature Set: xydsc_5] Epoch [121/250] - Avg Loss: 0.0254

Epoch 122/250: 100%| | 570/570 [00:03<00:00, 184.65it/s]

[Feature Set: xydsc_5] Epoch [122/250] - Avg Loss: 0.0303

Epoch 123/250: 100%| | 570/570 [00:03<00:00, 183.66it/s]

[Feature Set: xydsc_5] Epoch [123/250] - Avg Loss: 0.0483

Epoch 124/250: 100%| | 570/570 [00:03<00:00, 185.19it/s]

[Feature Set: xydsc_5] Epoch [124/250] - Avg Loss: 0.0922

Epoch 125/250: 100%| | 570/570 [00:03<00:00, 185.20it/s]

[Feature Set: xydsc_5] Epoch [125/250] - Avg Loss: 0.0372

Epoch 126/250: 100%| | 570/570 [00:03<00:00, 185.55it/s]

[Feature Set: xydsc_5] Epoch [126/250] - Avg Loss: 0.0388

Epoch 127/250: 100%| | 570/570 [00:03<00:00, 179.16it/s]

[Feature Set: xydsc_5] Epoch [127/250] - Avg Loss: 0.0161

Epoch 128/250: 100%| | 570/570 [00:03<00:00, 184.42it/s]

[Feature Set: xydsc_5] Epoch [128/250] - Avg Loss: 0.0134

Epoch 129/250: 100%| | 570/570 [00:03<00:00, 184.85it/s]

[Feature Set: xydsc_5] Epoch [129/250] - Avg Loss: 0.0296

Epoch 130/250: 100%| | 570/570 [00:03<00:00, 184.92it/s]

[Feature Set: xydsc_5] Epoch [130/250] - Avg Loss: 0.0167

Epoch 131/250: 100%| | 570/570 [00:03<00:00, 183.19it/s]

[Feature Set: xydsc_5] Epoch [131/250] - Avg Loss: 0.0177

Epoch 132/250: 100%| | 570/570 [00:03<00:00, 185.40it/s]

[Feature Set: xydsc_5] Epoch [132/250] - Avg Loss: 0.1316

Epoch 133/250: 100%| | 570/570 [00:03<00:00, 184.73it/s]

[Feature Set: xydsc_5] Epoch [133/250] - Avg Loss: 0.0590

Epoch 134/250: 100%| | 570/570 [00:03<00:00, 180.25it/s]

[Feature Set: xydsc_5] Epoch [134/250] - Avg Loss: 0.0627

Epoch 135/250: 100%| | 570/570 [00:03<00:00, 179.08it/s]

[Feature Set: xydsc_5] Epoch [135/250] - Avg Loss: 0.0347

Epoch 136/250: 100%| | 570/570 [00:03<00:00, 180.46it/s]

[Feature Set: xydsc_5] Epoch [136/250] - Avg Loss: 0.0285

Epoch 137/250: 100%| | 570/570 [00:03<00:00, 176.43it/s]

[Feature Set: xydsc_5] Epoch [137/250] - Avg Loss: 0.0399

Epoch 138/250: 100%| | 570/570 [00:03<00:00, 176.14it/s]

[Feature Set: xydsc_5] Epoch [138/250] - Avg Loss: 0.0366

Epoch 139/250: 100%| | 570/570 [00:03<00:00, 184.16it/s]

[Feature Set: xydsc_5] Epoch [139/250] - Avg Loss: 0.0212

Epoch 140/250: 100%| | 570/570 [00:03<00:00, 184.31it/s]

[Feature Set: xydsc_5] Epoch [140/250] - Avg Loss: 0.0338

Epoch 141/250: 100%| | 570/570 [00:03<00:00, 182.20it/s]

[Feature Set: xydsc_5] Epoch [141/250] - Avg Loss: 0.0779

Epoch 142/250: 100%| | 570/570 [00:03<00:00, 179.92it/s]

[Feature Set: xydsc_5] Epoch [142/250] - Avg Loss: 0.0468

Epoch 143/250: 100%| | 570/570 [00:03<00:00, 181.58it/s]

[Feature Set: xydsc_5] Epoch [143/250] - Avg Loss: 0.0131

Epoch 144/250: 100%| | 570/570 [00:03<00:00, 180.79it/s]

[Feature Set: xydsc_5] Epoch [144/250] - Avg Loss: 0.0357

Epoch 145/250: 100%| | 570/570 [00:03<00:00, 182.93it/s]

[Feature Set: xydsc_5] Epoch [145/250] - Avg Loss: 0.0214

Epoch 146/250: 100%| | 570/570 [00:03<00:00, 181.62it/s]

[Feature Set: xydsc_5] Epoch [146/250] - Avg Loss: 0.0576

Epoch 147/250: 100%| | 570/570 [00:03<00:00, 183.25it/s]

[Feature Set: xydsc_5] Epoch [147/250] - Avg Loss: 0.1117

Epoch 148/250: 100%| | 570/570 [00:03<00:00, 183.24it/s]

[Feature Set: xydsc_5] Epoch [148/250] - Avg Loss: 0.0413

Epoch 149/250: 100%| | 570/570 [00:03<00:00, 184.82it/s]

[Feature Set: xydsc_5] Epoch [149/250] - Avg Loss: 0.0122

Epoch 150/250: 100%| | 570/570 [00:03<00:00, 185.04it/s]

[Feature Set: xydsc_5] Epoch [150/250] - Avg Loss: 0.0225

Epoch 151/250: 100%| | 570/570 [00:03<00:00, 185.78it/s]

[Feature Set: xydsc_5] Epoch [151/250] - Avg Loss: 0.0371

Epoch 152/250: 100%| | 570/570 [00:03<00:00, 181.30it/s]

[Feature Set: xydsc_5] Epoch [152/250] - Avg Loss: 0.0478

Epoch 153/250: 100%| | 570/570 [00:03<00:00, 185.20it/s]

[Feature Set: xydsc_5] Epoch [153/250] - Avg Loss: 0.0157

Epoch 154/250: 100%| | 570/570 [00:03<00:00, 184.89it/s]

[Feature Set: xydsc_5] Epoch [154/250] - Avg Loss: 0.0087

Epoch 155/250: 100%| | 570/570 [00:03<00:00, 181.74it/s]

[Feature Set: xydsc_5] Epoch [155/250] - Avg Loss: 0.0279

Epoch 156/250: 100%| | 570/570 [00:03<00:00, 185.11it/s]

[Feature Set: xydsc_5] Epoch [156/250] - Avg Loss: 0.0479

Epoch 157/250: 100%| | 570/570 [00:03<00:00, 181.89it/s]

[Feature Set: xydsc_5] Epoch [157/250] - Avg Loss: 0.1172

Epoch 158/250: 100%| | 570/570 [00:03<00:00, 185.66it/s]

[Feature Set: xydsc_5] Epoch [158/250] - Avg Loss: 0.0641

Epoch 159/250: 100%| | 570/570 [00:03<00:00, 185.23it/s]

[Feature Set: xydsc_5] Epoch [159/250] - Avg Loss: 0.0478

Epoch 160/250: 100%| | 570/570 [00:03<00:00, 185.07it/s]

[Feature Set: xydsc_5] Epoch [160/250] - Avg Loss: 0.0688

Epoch 161/250: 100%| | 570/570 [00:03<00:00, 178.60it/s]

[Feature Set: xydsc_5] Epoch [161/250] - Avg Loss: 0.0170

Epoch 162/250: 100%| | 570/570 [00:03<00:00, 184.47it/s]

[Feature Set: xydsc_5] Epoch [162/250] - Avg Loss: 0.0066

Epoch 163/250: 100%| | 570/570 [00:03<00:00, 185.40it/s]

[Feature Set: xydsc_5] Epoch [163/250] - Avg Loss: 0.0150

Epoch 164/250: 100%| | 570/570 [00:03<00:00, 184.75it/s]

[Feature Set: xydsc_5] Epoch [164/250] - Avg Loss: 0.0081

Epoch 165/250: 100%| | 570/570 [00:03<00:00, 183.81it/s]

[Feature Set: xydsc_5] Epoch [165/250] - Avg Loss: 0.0589

Epoch 166/250: 100%| | 570/570 [00:03<00:00, 185.11it/s]

[Feature Set: xydsc_5] Epoch [166/250] - Avg Loss: 0.0902

Epoch 167/250: 100%| | 570/570 [00:03<00:00, 184.38it/s]

[Feature Set: xydsc_5] Epoch [167/250] - Avg Loss: 0.0689

Epoch 168/250: 100%| | 570/570 [00:03<00:00, 182.88it/s]

[Feature Set: xydsc_5] Epoch [168/250] - Avg Loss: 0.0219

Epoch 169/250: 100%| | 570/570 [00:03<00:00, 183.13it/s]

[Feature Set: xydsc_5] Epoch [169/250] - Avg Loss: 0.0221

Epoch 170/250: 100%| | 570/570 [00:03<00:00, 185.66it/s]

[Feature Set: xydsc_5] Epoch [170/250] - Avg Loss: 0.0238

Epoch 171/250: 100%| | 570/570 [00:03<00:00, 184.70it/s]

[Feature Set: xydsc_5] Epoch [171/250] - Avg Loss: 0.0464

Epoch 172/250: 100%| | 570/570 [00:03<00:00, 182.21it/s]

[Feature Set: xydsc_5] Epoch [172/250] - Avg Loss: 0.0195

Epoch 173/250: 100%| | 570/570 [00:03<00:00, 185.65it/s]

[Feature Set: xydsc_5] Epoch [173/250] - Avg Loss: 0.0319

Epoch 174/250: 100%| | 570/570 [00:03<00:00, 185.31it/s]

[Feature Set: xydsc_5] Epoch [174/250] - Avg Loss: 0.0553

Epoch 175/250: 100%| | 570/570 [00:03<00:00, 185.14it/s]

[Feature Set: xydsc_5] Epoch [175/250] - Avg Loss: 0.0074

Epoch 176/250: 100%| | 570/570 [00:03<00:00, 183.47it/s]

[Feature Set: xydsc_5] Epoch [176/250] - Avg Loss: 0.0076

Epoch 177/250: 100%| | 570/570 [00:03<00:00, 184.91it/s]

[Feature Set: xydsc_5] Epoch [177/250] - Avg Loss: 0.0657

Epoch 178/250: 100%| | 570/570 [00:03<00:00, 184.89it/s]

[Feature Set: xydsc_5] Epoch [178/250] - Avg Loss: 0.0235

Epoch 179/250: 100%| | 570/570 [00:03<00:00, 185.36it/s]

[Feature Set: xydsc_5] Epoch [179/250] - Avg Loss: 0.0219

Epoch 180/250: 100%| | 570/570 [00:03<00:00, 183.81it/s]

[Feature Set: xydsc_5] Epoch [180/250] - Avg Loss: 0.0406

Epoch 181/250: 100%| | 570/570 [00:03<00:00, 184.42it/s]

[Feature Set: xydsc_5] Epoch [181/250] - Avg Loss: 0.0797

Epoch 182/250: 100%| | 570/570 [00:03<00:00, 185.90it/s]

[Feature Set: xydsc_5] Epoch [182/250] - Avg Loss: 0.0069

Epoch 183/250: 100%| | 570/570 [00:03<00:00, 179.91it/s]

[Feature Set: xydsc_5] Epoch [183/250] - Avg Loss: 0.0236

Epoch 184/250: 100%| | 570/570 [00:03<00:00, 184.50it/s]

[Feature Set: xydsc_5] Epoch [184/250] - Avg Loss: 0.0487

Epoch 185/250: 100%| | 570/570 [00:03<00:00, 183.25it/s]

[Feature Set: xydsc_5] Epoch [185/250] - Avg Loss: 0.0540

Epoch 186/250: 100%| | 570/570 [00:03<00:00, 183.51it/s]

[Feature Set: xydsc_5] Epoch [186/250] - Avg Loss: 0.0082

Epoch 187/250: 100%| | 570/570 [00:03<00:00, 182.26it/s]

[Feature Set: xydsc_5] Epoch [187/250] - Avg Loss: 0.0078

Epoch 188/250: 100%| | 570/570 [00:03<00:00, 183.33it/s]

[Feature Set: xydsc_5] Epoch [188/250] - Avg Loss: 0.0069

Epoch 189/250: 100%| | 570/570 [00:03<00:00, 182.00it/s]

[Feature Set: xydsc_5] Epoch [189/250] - Avg Loss: 0.0602

Epoch 190/250: 100%| | 570/570 [00:03<00:00, 182.26it/s]

[Feature Set: xydsc_5] Epoch [190/250] - Avg Loss: 0.0425

Epoch 191/250: 100%| | 570/570 [00:03<00:00, 175.60it/s]

[Feature Set: xydsc_5] Epoch [191/250] - Avg Loss: 0.0567

Epoch 192/250: 100%| | 570/570 [00:03<00:00, 163.86it/s]

[Feature Set: xydsc_5] Epoch [192/250] - Avg Loss: 0.0383

Epoch 193/250: 100%| | 570/570 [00:03<00:00, 181.01it/s]

[Feature Set: xydsc_5] Epoch [193/250] - Avg Loss: 0.0074

Epoch 194/250: 100%| | 570/570 [00:03<00:00, 181.87it/s]

[Feature Set: xydsc_5] Epoch [194/250] - Avg Loss: 0.0305

Epoch 195/250: 100%| | 570/570 [00:03<00:00, 180.49it/s]

[Feature Set: xydsc_5] Epoch [195/250] - Avg Loss: 0.1420

Epoch 196/250: 100%| | 570/570 [00:03<00:00, 178.05it/s]

[Feature Set: xydsc_5] Epoch [196/250] - Avg Loss: 0.0763

Epoch 197/250: 100%| | 570/570 [00:03<00:00, 181.42it/s]

[Feature Set: xydsc_5] Epoch [197/250] - Avg Loss: 0.0173

Epoch 198/250: 100%| | 570/570 [00:03<00:00, 184.90it/s]

[Feature Set: xydsc_5] Epoch [198/250] - Avg Loss: 0.0082

Epoch 199/250: 100%| | 570/570 [00:03<00:00, 183.88it/s]

[Feature Set: xydsc_5] Epoch [199/250] - Avg Loss: 0.0071

Epoch 200/250: 100%| | 570/570 [00:03<00:00, 184.40it/s]

[Feature Set: xydsc_5] Epoch [200/250] - Avg Loss: 0.0146

Epoch 201/250: 100%| | 570/570 [00:03<00:00, 184.84it/s]

[Feature Set: xydsc_5] Epoch [201/250] - Avg Loss: 0.0119

Epoch 202/250: 100%| | 570/570 [00:03<00:00, 185.00it/s]

[Feature Set: xydsc_5] Epoch [202/250] - Avg Loss: 0.0212

Epoch 203/250: 100%| | 570/570 [00:03<00:00, 183.11it/s]

[Feature Set: xydsc_5] Epoch [203/250] - Avg Loss: 0.0077

Epoch 204/250: 100%| | 570/570 [00:03<00:00, 184.84it/s]

[Feature Set: xydsc_5] Epoch [204/250] - Avg Loss: 0.0812

Epoch 205/250: 100%| | 570/570 [00:03<00:00, 179.53it/s]

[Feature Set: xydsc_5] Epoch [205/250] - Avg Loss: 0.0582

Epoch 206/250: 100%| | 570/570 [00:03<00:00, 182.95it/s]

[Feature Set: xydsc_5] Epoch [206/250] - Avg Loss: 0.0155

Epoch 207/250: 100%| | 570/570 [00:03<00:00, 180.15it/s]

[Feature Set: xydsc_5] Epoch [207/250] - Avg Loss: 0.0046

Epoch 208/250: 100%| | 570/570 [00:03<00:00, 179.96it/s]

[Feature Set: xydsc_5] Epoch [208/250] - Avg Loss: 0.0379

Epoch 209/250: 100%| | 570/570 [00:03<00:00, 178.66it/s]

[Feature Set: xydsc_5] Epoch [209/250] - Avg Loss: 0.0383

Epoch 210/250: 100%| | 570/570 [00:03<00:00, 181.64it/s]

[Feature Set: xydsc_5] Epoch [210/250] - Avg Loss: 0.0721

Epoch 211/250: 100%| | 570/570 [00:03<00:00, 182.62it/s]

[Feature Set: xydsc_5] Epoch [211/250] - Avg Loss: 0.0122

Epoch 212/250: 100%| | 570/570 [00:03<00:00, 181.48it/s]

[Feature Set: xydsc_5] Epoch [212/250] - Avg Loss: 0.0450

Epoch 213/250: 100%| | 570/570 [00:03<00:00, 181.77it/s]

[Feature Set: xydsc_5] Epoch [213/250] - Avg Loss: 0.0117

Epoch 214/250: 100%| | 570/570 [00:03<00:00, 179.19it/s]

[Feature Set: xydsc_5] Epoch [214/250] - Avg Loss: 0.0057

Epoch 215/250: 100%| | 570/570 [00:03<00:00, 179.22it/s]

[Feature Set: xydsc_5] Epoch [215/250] - Avg Loss: 0.0549

Epoch 216/250: 100%| | 570/570 [00:03<00:00, 184.63it/s]

[Feature Set: xydsc_5] Epoch [216/250] - Avg Loss: 0.0243

Epoch 217/250: 100%| | 570/570 [00:03<00:00, 183.84it/s]

[Feature Set: xydsc_5] Epoch [217/250] - Avg Loss: 0.0074

Epoch 218/250: 100%| | 570/570 [00:03<00:00, 185.60it/s]

[Feature Set: xydsc_5] Epoch [218/250] - Avg Loss: 0.0389

Epoch 219/250: 100%| | 570/570 [00:03<00:00, 185.77it/s]

[Feature Set: xydsc_5] Epoch [219/250] - Avg Loss: 0.0421

Epoch 220/250: 100%| | 570/570 [00:03<00:00, 184.71it/s]

[Feature Set: xydsc_5] Epoch [220/250] - Avg Loss: 0.0747

Epoch 221/250: 100%| | 570/570 [00:03<00:00, 183.45it/s]

[Feature Set: xydsc_5] Epoch [221/250] - Avg Loss: 0.0270

Epoch 222/250: 100%| | 570/570 [00:03<00:00, 170.72it/s]

[Feature Set: xydsc_5] Epoch [222/250] - Avg Loss: 0.0634

Epoch 223/250: 100%| | 570/570 [00:03<00:00, 179.26it/s]

[Feature Set: xydsc_5] Epoch [223/250] - Avg Loss: 0.0133

Epoch 224/250: 100%| | 570/570 [00:03<00:00, 183.01it/s]

[Feature Set: xydsc_5] Epoch [224/250] - Avg Loss: 0.0067

Epoch 225/250: 100%| | 570/570 [00:03<00:00, 184.90it/s]

[Feature Set: xydsc_5] Epoch [225/250] - Avg Loss: 0.0148

Epoch 226/250: 100%| | 570/570 [00:03<00:00, 180.75it/s]

[Feature Set: xydsc_5] Epoch [226/250] - Avg Loss: 0.0147

Epoch 227/250: 100%| | 570/570 [00:03<00:00, 178.54it/s]

[Feature Set: xydsc_5] Epoch [227/250] - Avg Loss: 0.0357

Epoch 228/250: 100%| | 570/570 [00:03<00:00, 183.32it/s]

[Feature Set: xydsc_5] Epoch [228/250] - Avg Loss: 0.0436

Epoch 229/250: 100%| | 570/570 [00:03<00:00, 185.37it/s]

[Feature Set: xydsc_5] Epoch [229/250] - Avg Loss: 0.0329

Epoch 230/250: 100%| | 570/570 [00:03<00:00, 185.62it/s]

[Feature Set: xydsc_5] Epoch [230/250] - Avg Loss: 0.0427

Epoch 231/250: 100%| | 570/570 [00:03<00:00, 183.34it/s]

[Feature Set: xydsc_5] Epoch [231/250] - Avg Loss: 0.0191

Epoch 232/250: 100%| | 570/570 [00:03<00:00, 185.03it/s]

[Feature Set: xydsc_5] Epoch [232/250] - Avg Loss: 0.0384

Epoch 233/250: 100%| | 570/570 [00:03<00:00, 184.51it/s]

[Feature Set: xydsc_5] Epoch [233/250] - Avg Loss: 0.0334

Epoch 234/250: 100%| | 570/570 [00:03<00:00, 185.46it/s]

[Feature Set: xydsc_5] Epoch [234/250] - Avg Loss: 0.0338

Epoch 235/250: 100%| | 570/570 [00:03<00:00, 176.11it/s]

[Feature Set: xydsc_5] Epoch [235/250] - Avg Loss: 0.0230

Epoch 236/250: 100%| | 570/570 [00:03<00:00, 182.41it/s]

[Feature Set: xydsc_5] Epoch [236/250] - Avg Loss: 0.0255

Epoch 237/250: 100%| | 570/570 [00:03<00:00, 182.89it/s]

[Feature Set: xydsc_5] Epoch [237/250] - Avg Loss: 0.0041

Epoch 238/250: 100%| | 570/570 [00:03<00:00, 182.88it/s]

[Feature Set: xydsc_5] Epoch [238/250] - Avg Loss: 0.0082

Epoch 239/250: 100%| | 570/570 [00:03<00:00, 181.50it/s]

[Feature Set: xydsc_5] Epoch [239/250] - Avg Loss: 0.0042

Epoch 240/250: 100%| | 570/570 [00:03<00:00, 183.76it/s]

[Feature Set: xydsc_5] Epoch [240/250] - Avg Loss: 0.0020

Epoch 241/250: 100%| | 570/570 [00:03<00:00, 180.67it/s]

[Feature Set: xydsc_5] Epoch [241/250] - Avg Loss: 0.0413

Epoch 242/250: 100%| | 570/570 [00:03<00:00, 179.79it/s]

[Feature Set: xydsc_5] Epoch [242/250] - Avg Loss: 0.0330

Epoch 243/250: 100%| | 570/570 [00:03<00:00, 181.75it/s]

[Feature Set: xydsc_5] Epoch [243/250] - Avg Loss: 0.0066

Epoch 244/250: 100%| | 570/570 [00:03<00:00, 183.67it/s]

[Feature Set: xydsc_5] Epoch [244/250] - Avg Loss: 0.0383

Epoch 245/250: 100%| | 570/570 [00:03<00:00, 185.09it/s]

[Feature Set: xydsc_5] Epoch [245/250] - Avg Loss: 0.0070

Epoch 246/250: 100%| | 570/570 [00:03<00:00, 184.03it/s]

[Feature Set: xydsc_5] Epoch [246/250] - Avg Loss: 0.0122

Epoch 247/250: 100%| | 570/570 [00:03<00:00, 182.29it/s]

[Feature Set: xydsc_5] Epoch [247/250] - Avg Loss: 0.0044

Epoch 248/250: 100%| | 570/570 [00:03<00:00, 184.38it/s]

[Feature Set: xydsc_5] Epoch [248/250] - Avg Loss: 0.0107

Epoch 249/250: 100%| | 570/570 [00:03<00:00, 183.60it/s]

[Feature Set: xydsc_5] Epoch [249/250] - Avg Loss: 0.0566

Epoch 250/250: 100%| | 570/570 [00:03<00:00, 181.47it/s]

[Feature Set: xydsc_5] Epoch [250/250] - Avg Loss: 0.1598

[Eval] xydsc_5: 100%| | 143/143 [00:00<00:00, 319.26it/s]

Epoch 1/250: 100%| | 570/570 [00:03<00:00, 181.97it/s]

[Feature Set: xydi_3] Epoch [1/250] - Avg Loss: 0.6743
Epoch 2/250: 100%| | 570/570 [00:03<00:00, 182.89it/s]

[Feature Set: xydi_3] Epoch [2/250] - Avg Loss: 0.6633
Epoch 3/250: 100%| | 570/570 [00:03<00:00, 180.25it/s]

[Feature Set: xydi_3] Epoch [3/250] - Avg Loss: 0.6583
Epoch 4/250: 100%| | 570/570 [00:03<00:00, 183.47it/s]

[Feature Set: xydi_3] Epoch [4/250] - Avg Loss: 0.6514
Epoch 5/250: 100%| | 570/570 [00:03<00:00, 182.72it/s]

[Feature Set: xydi_3] Epoch [5/250] - Avg Loss: 0.6392
Epoch 6/250: 100%| | 570/570 [00:03<00:00, 179.49it/s]

[Feature Set: xydi_3] Epoch [6/250] - Avg Loss: 0.6271
Epoch 7/250: 100%| | 570/570 [00:03<00:00, 184.30it/s]

[Feature Set: xydi_3] Epoch [7/250] - Avg Loss: 0.6119
Epoch 8/250: 100%| | 570/570 [00:03<00:00, 184.90it/s]

[Feature Set: xydi_3] Epoch [8/250] - Avg Loss: 0.5943
Epoch 9/250: 100%| | 570/570 [00:03<00:00, 179.96it/s]

[Feature Set: xydi_3] Epoch [9/250] - Avg Loss: 0.5710
Epoch 10/250: 100%| | 570/570 [00:03<00:00, 183.82it/s]

[Feature Set: xydi_3] Epoch [10/250] - Avg Loss: 0.5420
Epoch 11/250: 100%| | 570/570 [00:03<00:00, 181.34it/s]

[Feature Set: xydi_3] Epoch [11/250] - Avg Loss: 0.5281
Epoch 12/250: 100%| | 570/570 [00:03<00:00, 183.41it/s]

[Feature Set: xydi_3] Epoch [12/250] - Avg Loss: 0.4865
Epoch 13/250: 100%| | 570/570 [00:03<00:00, 182.29it/s]

[Feature Set: xydi_3] Epoch [13/250] - Avg Loss: 0.4622
Epoch 14/250: 100%| | 570/570 [00:03<00:00, 183.32it/s]

[Feature Set: xydi_3] Epoch [14/250] - Avg Loss: 0.4315
Epoch 15/250: 100%| | 570/570 [00:03<00:00, 181.47it/s]

[Feature Set: xydi_3] Epoch [15/250] - Avg Loss: 0.4157
Epoch 16/250: 100%| | 570/570 [00:03<00:00, 179.67it/s]

[Feature Set: xydi_3] Epoch [16/250] - Avg Loss: 0.3915
Epoch 17/250: 100%| | 570/570 [00:03<00:00, 183.32it/s]

[Feature Set: xydi_3] Epoch [17/250] - Avg Loss: 0.3970
Epoch 18/250: 100%| | 570/570 [00:03<00:00, 185.41it/s]

[Feature Set: xydi_3] Epoch [18/250] - Avg Loss: 0.3673
Epoch 19/250: 100%| | 570/570 [00:03<00:00, 185.77it/s]

[Feature Set: xydi_3] Epoch [19/250] - Avg Loss: 0.3578
Epoch 20/250: 100%| | 570/570 [00:03<00:00, 180.62it/s]

[Feature Set: xydi_3] Epoch [20/250] - Avg Loss: 0.3778
Epoch 21/250: 100%| | 570/570 [00:03<00:00, 184.29it/s]

[Feature Set: xydi_3] Epoch [21/250] - Avg Loss: 0.3311
Epoch 22/250: 100%| | 570/570 [00:03<00:00, 184.41it/s]

[Feature Set: xydi_3] Epoch [22/250] - Avg Loss: 0.3323
Epoch 23/250: 100%| | 570/570 [00:03<00:00, 178.60it/s]

[Feature Set: xydi_3] Epoch [23/250] - Avg Loss: 0.3003
Epoch 24/250: 100%| | 570/570 [00:03<00:00, 179.36it/s]

[Feature Set: xydi_3] Epoch [24/250] - Avg Loss: 0.2862
Epoch 25/250: 100%| | 570/570 [00:03<00:00, 182.68it/s]

[Feature Set: xydi_3] Epoch [25/250] - Avg Loss: 0.2774
Epoch 26/250: 100%| | 570/570 [00:03<00:00, 180.60it/s]

[Feature Set: xydi_3] Epoch [26/250] - Avg Loss: 0.2650
Epoch 27/250: 100%| | 570/570 [00:03<00:00, 175.91it/s]

[Feature Set: xydi_3] Epoch [27/250] - Avg Loss: 0.2465
Epoch 28/250: 100%| | 570/570 [00:03<00:00, 178.98it/s]

[Feature Set: xydi_3] Epoch [28/250] - Avg Loss: 0.2446
Epoch 29/250: 100%| | 570/570 [00:03<00:00, 181.72it/s]

[Feature Set: xydi_3] Epoch [29/250] - Avg Loss: 0.2302
Epoch 30/250: 100%| | 570/570 [00:03<00:00, 180.54it/s]

[Feature Set: xydi_3] Epoch [30/250] - Avg Loss: 0.2434
Epoch 31/250: 100%| | 570/570 [00:03<00:00, 182.66it/s]

[Feature Set: xydi_3] Epoch [31/250] - Avg Loss: 0.2296
Epoch 32/250: 100%| | 570/570 [00:03<00:00, 183.55it/s]

[Feature Set: xydi_3] Epoch [32/250] - Avg Loss: 0.1997
Epoch 33/250: 100%| | 570/570 [00:03<00:00, 178.17it/s]

[Feature Set: xydi_3] Epoch [33/250] - Avg Loss: 0.1860
Epoch 34/250: 100%| | 570/570 [00:03<00:00, 182.18it/s]

[Feature Set: xydi_3] Epoch [34/250] - Avg Loss: 0.1574
Epoch 35/250: 100%| | 570/570 [00:03<00:00, 173.85it/s]

[Feature Set: xydi_3] Epoch [35/250] - Avg Loss: 0.1783
Epoch 36/250: 100%| | 570/570 [00:03<00:00, 183.43it/s]

[Feature Set: xydi_3] Epoch [36/250] - Avg Loss: 0.1890
Epoch 37/250: 100%| | 570/570 [00:03<00:00, 184.59it/s]

[Feature Set: xydi_3] Epoch [37/250] - Avg Loss: 0.1341
Epoch 38/250: 100%| | 570/570 [00:03<00:00, 177.78it/s]

[Feature Set: xydi_3] Epoch [38/250] - Avg Loss: 0.2049
Epoch 39/250: 100%| | 570/570 [00:03<00:00, 184.03it/s]

[Feature Set: xydi_3] Epoch [39/250] - Avg Loss: 0.1910
Epoch 40/250: 100%| | 570/570 [00:03<00:00, 182.62it/s]

[Feature Set: xydi_3] Epoch [40/250] - Avg Loss: 0.1219
Epoch 41/250: 100%| | 570/570 [00:03<00:00, 178.33it/s]

[Feature Set: xydi_3] Epoch [41/250] - Avg Loss: 0.1569
Epoch 42/250: 100%| | 570/570 [00:03<00:00, 184.80it/s]

[Feature Set: xydi_3] Epoch [42/250] - Avg Loss: 0.1344
Epoch 43/250: 100%| | 570/570 [00:03<00:00, 184.68it/s]

[Feature Set: xydi_3] Epoch [43/250] - Avg Loss: 0.1580
Epoch 44/250: 100%| | 570/570 [00:03<00:00, 181.23it/s]

[Feature Set: xydi_3] Epoch [44/250] - Avg Loss: 0.1711
Epoch 45/250: 100%| | 570/570 [00:03<00:00, 182.35it/s]

[Feature Set: xydi_3] Epoch [45/250] - Avg Loss: 0.1101
Epoch 46/250: 100%| | 570/570 [00:03<00:00, 185.79it/s]

[Feature Set: xydi_3] Epoch [46/250] - Avg Loss: 0.0955
Epoch 47/250: 100%| | 570/570 [00:03<00:00, 185.42it/s]

[Feature Set: xydi_3] Epoch [47/250] - Avg Loss: 0.1133
Epoch 48/250: 100%| | 570/570 [00:03<00:00, 182.58it/s]

[Feature Set: xydi_3] Epoch [48/250] - Avg Loss: 0.1018
Epoch 49/250: 100%| | 570/570 [00:03<00:00, 181.56it/s]

[Feature Set: xydi_3] Epoch [49/250] - Avg Loss: 0.1166
Epoch 50/250: 100%| | 570/570 [00:03<00:00, 182.82it/s]

[Feature Set: xydi_3] Epoch [50/250] - Avg Loss: 0.0878
Epoch 51/250: 100%| | 570/570 [00:03<00:00, 184.24it/s]

[Feature Set: xydi_3] Epoch [51/250] - Avg Loss: 0.1014
Epoch 52/250: 100%| | 570/570 [00:03<00:00, 182.23it/s]

[Feature Set: xydi_3] Epoch [52/250] - Avg Loss: 0.1989
Epoch 53/250: 100%| | 570/570 [00:03<00:00, 183.23it/s]

[Feature Set: xydi_3] Epoch [53/250] - Avg Loss: 0.1129
Epoch 54/250: 100%| | 570/570 [00:03<00:00, 184.94it/s]

[Feature Set: xydi_3] Epoch [54/250] - Avg Loss: 0.1222
Epoch 55/250: 100%| | 570/570 [00:03<00:00, 182.87it/s]

[Feature Set: xydi_3] Epoch [55/250] - Avg Loss: 0.0939
Epoch 56/250: 100%| | 570/570 [00:03<00:00, 184.86it/s]

[Feature Set: xydi_3] Epoch [56/250] - Avg Loss: 0.0771
Epoch 57/250: 100%| | 570/570 [00:03<00:00, 184.86it/s]

[Feature Set: xydi_3] Epoch [57/250] - Avg Loss: 0.0880
Epoch 58/250: 100%| | 570/570 [00:03<00:00, 183.20it/s]

[Feature Set: xydi_3] Epoch [58/250] - Avg Loss: 0.0737
Epoch 59/250: 100%| | 570/570 [00:03<00:00, 183.70it/s]

[Feature Set: xydi_3] Epoch [59/250] - Avg Loss: 0.1031
Epoch 60/250: 100%| | 570/570 [00:03<00:00, 185.48it/s]

[Feature Set: xydi_3] Epoch [60/250] - Avg Loss: 0.0683
Epoch 61/250: 100%| | 570/570 [00:03<00:00, 185.09it/s]

[Feature Set: xydi_3] Epoch [61/250] - Avg Loss: 0.0618
Epoch 62/250: 100%| | 570/570 [00:03<00:00, 180.99it/s]

[Feature Set: xydi_3] Epoch [62/250] - Avg Loss: 0.0761
Epoch 63/250: 100%| | 570/570 [00:03<00:00, 186.10it/s]

[Feature Set: xydi_3] Epoch [63/250] - Avg Loss: 0.1696
Epoch 64/250: 100%| | 570/570 [00:03<00:00, 182.11it/s]

[Feature Set: xydi_3] Epoch [64/250] - Avg Loss: 0.0796
Epoch 65/250: 100%| | 570/570 [00:03<00:00, 180.41it/s]

[Feature Set: xydi_3] Epoch [65/250] - Avg Loss: 0.0405
Epoch 66/250: 100%| | 570/570 [00:03<00:00, 177.10it/s]

[Feature Set: xydi_3] Epoch [66/250] - Avg Loss: 0.0653
Epoch 67/250: 100%| | 570/570 [00:03<00:00, 177.90it/s]

[Feature Set: xydi_3] Epoch [67/250] - Avg Loss: 0.0614
Epoch 68/250: 100%| | 570/570 [00:03<00:00, 179.87it/s]

[Feature Set: xydi_3] Epoch [68/250] - Avg Loss: 0.0547
Epoch 69/250: 100%| | 570/570 [00:03<00:00, 168.59it/s]

[Feature Set: xydi_3] Epoch [69/250] - Avg Loss: 0.2253
Epoch 70/250: 100%| | 570/570 [00:03<00:00, 173.80it/s]

[Feature Set: xydi_3] Epoch [70/250] - Avg Loss: 0.1099
Epoch 71/250: 100%| | 570/570 [00:03<00:00, 178.96it/s]

[Feature Set: xydi_3] Epoch [71/250] - Avg Loss: 0.0835
Epoch 72/250: 100%| | 570/570 [00:03<00:00, 176.54it/s]

[Feature Set: xydi_3] Epoch [72/250] - Avg Loss: 0.0475
Epoch 73/250: 100%| | 570/570 [00:03<00:00, 185.24it/s]

[Feature Set: xydi_3] Epoch [73/250] - Avg Loss: 0.1103
Epoch 74/250: 100%| | 570/570 [00:03<00:00, 180.40it/s]

[Feature Set: xydi_3] Epoch [74/250] - Avg Loss: 0.0577
Epoch 75/250: 100%| | 570/570 [00:03<00:00, 164.86it/s]

[Feature Set: xydi_3] Epoch [75/250] - Avg Loss: 0.0443
Epoch 76/250: 100%| | 570/570 [00:03<00:00, 184.81it/s]

[Feature Set: xydi_3] Epoch [76/250] - Avg Loss: 0.0531
Epoch 77/250: 100%| | 570/570 [00:03<00:00, 183.94it/s]

[Feature Set: xydi_3] Epoch [77/250] - Avg Loss: 0.0643
Epoch 78/250: 100%| | 570/570 [00:03<00:00, 183.13it/s]

[Feature Set: xydi_3] Epoch [78/250] - Avg Loss: 0.0858
Epoch 79/250: 100%| | 570/570 [00:03<00:00, 184.60it/s]

[Feature Set: xydi_3] Epoch [79/250] - Avg Loss: 0.1067
Epoch 80/250: 100%| | 570/570 [00:03<00:00, 182.07it/s]

[Feature Set: xydi_3] Epoch [80/250] - Avg Loss: 0.0683
Epoch 81/250: 100%| | 570/570 [00:03<00:00, 185.25it/s]

[Feature Set: xydi_3] Epoch [81/250] - Avg Loss: 0.0467
Epoch 82/250: 100%| | 570/570 [00:03<00:00, 182.63it/s]

[Feature Set: xydi_3] Epoch [82/250] - Avg Loss: 0.0480
Epoch 83/250: 100%| | 570/570 [00:03<00:00, 185.35it/s]

[Feature Set: xydi_3] Epoch [83/250] - Avg Loss: 0.0492
Epoch 84/250: 100%| | 570/570 [00:03<00:00, 183.71it/s]

[Feature Set: xydi_3] Epoch [84/250] - Avg Loss: 0.0203
Epoch 85/250: 100%| | 570/570 [00:03<00:00, 183.99it/s]

[Feature Set: xydi_3] Epoch [85/250] - Avg Loss: 0.0260
Epoch 86/250: 100%| | 570/570 [00:03<00:00, 184.09it/s]

[Feature Set: xydi_3] Epoch [86/250] - Avg Loss: 0.0696
Epoch 87/250: 100%| | 570/570 [00:03<00:00, 177.77it/s]

[Feature Set: xydi_3] Epoch [87/250] - Avg Loss: 0.0498
Epoch 88/250: 100%| | 570/570 [00:03<00:00, 183.66it/s]

[Feature Set: xydi_3] Epoch [88/250] - Avg Loss: 0.0424
Epoch 89/250: 100%| | 570/570 [00:03<00:00, 181.79it/s]

[Feature Set: xydi_3] Epoch [89/250] - Avg Loss: 0.0568
Epoch 90/250: 100%| | 570/570 [00:03<00:00, 180.54it/s]

[Feature Set: xydi_3] Epoch [90/250] - Avg Loss: 0.0274
Epoch 91/250: 100%| | 570/570 [00:03<00:00, 184.06it/s]

[Feature Set: xydi_3] Epoch [91/250] - Avg Loss: 0.0599
Epoch 92/250: 100%| | 570/570 [00:03<00:00, 183.29it/s]

[Feature Set: xydi_3] Epoch [92/250] - Avg Loss: 0.0647
Epoch 93/250: 100%| | 570/570 [00:03<00:00, 185.11it/s]

[Feature Set: xydi_3] Epoch [93/250] - Avg Loss: 0.0798
Epoch 94/250: 100%| | 570/570 [00:03<00:00, 185.61it/s]

[Feature Set: xydi_3] Epoch [94/250] - Avg Loss: 0.0573
Epoch 95/250: 100%| | 570/570 [00:03<00:00, 183.93it/s]

[Feature Set: xydi_3] Epoch [95/250] - Avg Loss: 0.0270
Epoch 96/250: 100%| | 570/570 [00:03<00:00, 184.46it/s]

[Feature Set: xydi_3] Epoch [96/250] - Avg Loss: 0.0363
Epoch 97/250: 100%| | 570/570 [00:03<00:00, 184.93it/s]

[Feature Set: xydi_3] Epoch [97/250] - Avg Loss: 0.0581
Epoch 98/250: 100%| | 570/570 [00:03<00:00, 185.05it/s]

[Feature Set: xydi_3] Epoch [98/250] - Avg Loss: 0.0623
Epoch 99/250: 100%| | 570/570 [00:03<00:00, 182.83it/s]

[Feature Set: xydi_3] Epoch [99/250] - Avg Loss: 0.0278
Epoch 100/250: 100%| | 570/570 [00:03<00:00, 177.35it/s]

[Feature Set: xydi_3] Epoch [100/250] - Avg Loss: 0.0219
Epoch 101/250: 100%| | 570/570 [00:03<00:00, 182.67it/s]

[Feature Set: xydi_3] Epoch [101/250] - Avg Loss: 0.0295
Epoch 102/250: 100%| | 570/570 [00:03<00:00, 178.95it/s]

[Feature Set: xydi_3] Epoch [102/250] - Avg Loss: 0.0802
Epoch 103/250: 100%| | 570/570 [00:03<00:00, 176.67it/s]

[Feature Set: xydi_3] Epoch [103/250] - Avg Loss: 0.1359
Epoch 104/250: 100%| | 570/570 [00:03<00:00, 176.21it/s]

[Feature Set: xydi_3] Epoch [104/250] - Avg Loss: 0.0615
Epoch 105/250: 100%| | 570/570 [00:03<00:00, 178.99it/s]

[Feature Set: xydi_3] Epoch [105/250] - Avg Loss: 0.0213
Epoch 106/250: 100%| | 570/570 [00:03<00:00, 179.82it/s]

[Feature Set: xydi_3] Epoch [106/250] - Avg Loss: 0.0190
Epoch 107/250: 100%| | 570/570 [00:03<00:00, 180.18it/s]

[Feature Set: xydi_3] Epoch [107/250] - Avg Loss: 0.0187
Epoch 108/250: 100%| | 570/570 [00:03<00:00, 182.13it/s]

[Feature Set: xydi_3] Epoch [108/250] - Avg Loss: 0.0549
Epoch 109/250: 100%| | 570/570 [00:03<00:00, 180.28it/s]

[Feature Set: xydi_3] Epoch [109/250] - Avg Loss: 0.0438
Epoch 110/250: 100%| | 570/570 [00:03<00:00, 167.15it/s]

[Feature Set: xydi_3] Epoch [110/250] - Avg Loss: 0.0556
Epoch 111/250: 100%| | 570/570 [00:03<00:00, 181.70it/s]

[Feature Set: xydi_3] Epoch [111/250] - Avg Loss: 0.1127
Epoch 112/250: 100%| | 570/570 [00:03<00:00, 179.77it/s]

[Feature Set: xydi_3] Epoch [112/250] - Avg Loss: 0.0212
Epoch 113/250: 100%| | 570/570 [00:03<00:00, 180.49it/s]

[Feature Set: xydi_3] Epoch [113/250] - Avg Loss: 0.0156
Epoch 114/250: 100%| | 570/570 [00:03<00:00, 181.27it/s]

[Feature Set: xydi_3] Epoch [114/250] - Avg Loss: 0.0319
Epoch 115/250: 100%| | 570/570 [00:03<00:00, 174.78it/s]

[Feature Set: xydi_3] Epoch [115/250] - Avg Loss: 0.0095
Epoch 116/250: 100%| | 570/570 [00:03<00:00, 171.44it/s]

[Feature Set: xydi_3] Epoch [116/250] - Avg Loss: 0.0192
Epoch 117/250: 100%| | 570/570 [00:03<00:00, 161.25it/s]

[Feature Set: xydi_3] Epoch [117/250] - Avg Loss: 0.1276
Epoch 118/250: 100%| | 570/570 [00:03<00:00, 178.81it/s]

[Feature Set: xydi_3] Epoch [118/250] - Avg Loss: 0.0442
Epoch 119/250: 100%| | 570/570 [00:03<00:00, 170.93it/s]

[Feature Set: xydi_3] Epoch [119/250] - Avg Loss: 0.0193
Epoch 120/250: 100%| | 570/570 [00:03<00:00, 179.83it/s]

[Feature Set: xydi_3] Epoch [120/250] - Avg Loss: 0.0075
Epoch 121/250: 100%| | 570/570 [00:03<00:00, 178.59it/s]

[Feature Set: xydi_3] Epoch [121/250] - Avg Loss: 0.0095
Epoch 122/250: 100%| | 570/570 [00:03<00:00, 175.54it/s]

[Feature Set: xydi_3] Epoch [122/250] - Avg Loss: 0.0081
Epoch 123/250: 100%| | 570/570 [00:03<00:00, 177.63it/s]

[Feature Set: xydi_3] Epoch [123/250] - Avg Loss: 0.0279
Epoch 124/250: 100%| | 570/570 [00:03<00:00, 173.17it/s]

[Feature Set: xydi_3] Epoch [124/250] - Avg Loss: 0.0866
Epoch 125/250: 100%| | 570/570 [00:03<00:00, 169.84it/s]

[Feature Set: xydi_3] Epoch [125/250] - Avg Loss: 0.0267
Epoch 126/250: 100%| | 570/570 [00:03<00:00, 172.21it/s]

[Feature Set: xydi_3] Epoch [126/250] - Avg Loss: 0.0478
Epoch 127/250: 100%| | 570/570 [00:03<00:00, 181.53it/s]

[Feature Set: xydi_3] Epoch [127/250] - Avg Loss: 0.0145
Epoch 128/250: 100%| | 570/570 [00:03<00:00, 176.87it/s]

[Feature Set: xydi_3] Epoch [128/250] - Avg Loss: 0.0308
Epoch 129/250: 100%| | 570/570 [00:03<00:00, 178.69it/s]

[Feature Set: xydi_3] Epoch [129/250] - Avg Loss: 0.0556
Epoch 130/250: 100%| | 570/570 [00:03<00:00, 178.96it/s]

[Feature Set: xydi_3] Epoch [130/250] - Avg Loss: 0.0531
Epoch 131/250: 100%| | 570/570 [00:03<00:00, 177.57it/s]

[Feature Set: xydi_3] Epoch [131/250] - Avg Loss: 0.0941
Epoch 132/250: 100%| | 570/570 [00:03<00:00, 170.19it/s]

[Feature Set: xydi_3] Epoch [132/250] - Avg Loss: 0.0416
Epoch 133/250: 100%| | 570/570 [00:03<00:00, 181.19it/s]

[Feature Set: xydi_3] Epoch [133/250] - Avg Loss: 0.0177
Epoch 134/250: 100%| | 570/570 [00:03<00:00, 178.78it/s]

[Feature Set: xydi_3] Epoch [134/250] - Avg Loss: 0.0230
Epoch 135/250: 100%| | 570/570 [00:03<00:00, 180.91it/s]

[Feature Set: xydi_3] Epoch [135/250] - Avg Loss: 0.0122
Epoch 136/250: 100%| | 570/570 [00:03<00:00, 181.57it/s]

[Feature Set: xydi_3] Epoch [136/250] - Avg Loss: 0.0080
Epoch 137/250: 100%| | 570/570 [00:03<00:00, 182.26it/s]

[Feature Set: xydi_3] Epoch [137/250] - Avg Loss: 0.0041
Epoch 138/250: 100%| | 570/570 [00:03<00:00, 181.02it/s]

[Feature Set: xydi_3] Epoch [138/250] - Avg Loss: 0.0243
Epoch 139/250: 100%| | 570/570 [00:03<00:00, 178.62it/s]

[Feature Set: xydi_3] Epoch [139/250] - Avg Loss: 0.1226
Epoch 140/250: 100%| | 570/570 [00:03<00:00, 182.11it/s]

[Feature Set: xydi_3] Epoch [140/250] - Avg Loss: 0.0386
Epoch 141/250: 100%| | 570/570 [00:03<00:00, 180.83it/s]

[Feature Set: xydi_3] Epoch [141/250] - Avg Loss: 0.0163
Epoch 142/250: 100%| | 570/570 [00:03<00:00, 179.08it/s]

[Feature Set: xydi_3] Epoch [142/250] - Avg Loss: 0.0662
Epoch 143/250: 100%| | 570/570 [00:03<00:00, 181.89it/s]

[Feature Set: xydi_3] Epoch [143/250] - Avg Loss: 0.0309
Epoch 144/250: 100%| | 570/570 [00:03<00:00, 181.53it/s]

[Feature Set: xydi_3] Epoch [144/250] - Avg Loss: 0.0274
Epoch 145/250: 100%| | 570/570 [00:03<00:00, 177.89it/s]

[Feature Set: xydi_3] Epoch [145/250] - Avg Loss: 0.0403
Epoch 146/250: 100%| | 570/570 [00:03<00:00, 180.78it/s]

[Feature Set: xydi_3] Epoch [146/250] - Avg Loss: 0.0320
Epoch 147/250: 100%| | 570/570 [00:03<00:00, 182.39it/s]

[Feature Set: xydi_3] Epoch [147/250] - Avg Loss: 0.0365
Epoch 148/250: 100%| | 570/570 [00:03<00:00, 157.12it/s]

[Feature Set: xydi_3] Epoch [148/250] - Avg Loss: 0.0078
Epoch 149/250: 100%| | 570/570 [00:03<00:00, 154.06it/s]

[Feature Set: xydi_3] Epoch [149/250] - Avg Loss: 0.0221
Epoch 150/250: 100%| | 570/570 [00:03<00:00, 164.15it/s]

[Feature Set: xydi_3] Epoch [150/250] - Avg Loss: 0.0436
Epoch 151/250: 100%| | 570/570 [00:03<00:00, 177.47it/s]

[Feature Set: xydi_3] Epoch [151/250] - Avg Loss: 0.0815
Epoch 152/250: 100%| | 570/570 [00:03<00:00, 177.78it/s]

[Feature Set: xydi_3] Epoch [152/250] - Avg Loss: 0.0460
Epoch 153/250: 100%| | 570/570 [00:03<00:00, 176.71it/s]

[Feature Set: xydi_3] Epoch [153/250] - Avg Loss: 0.0129
Epoch 154/250: 100%| | 570/570 [00:03<00:00, 181.08it/s]

[Feature Set: xydi_3] Epoch [154/250] - Avg Loss: 0.0038
Epoch 155/250: 100%| | 570/570 [00:03<00:00, 179.64it/s]

[Feature Set: xydi_3] Epoch [155/250] - Avg Loss: 0.0055
Epoch 156/250: 100%| | 570/570 [00:03<00:00, 180.41it/s]

[Feature Set: xydi_3] Epoch [156/250] - Avg Loss: 0.0812
Epoch 157/250: 100%| | 570/570 [00:03<00:00, 174.20it/s]

[Feature Set: xydi_3] Epoch [157/250] - Avg Loss: 0.0535
Epoch 158/250: 100%| | 570/570 [00:03<00:00, 174.22it/s]

[Feature Set: xydi_3] Epoch [158/250] - Avg Loss: 0.0221
Epoch 159/250: 100%| | 570/570 [00:03<00:00, 182.03it/s]

[Feature Set: xydi_3] Epoch [159/250] - Avg Loss: 0.0797
Epoch 160/250: 100%| | 570/570 [00:03<00:00, 177.91it/s]

[Feature Set: xydi_3] Epoch [160/250] - Avg Loss: 0.0658
Epoch 161/250: 100%| | 570/570 [00:03<00:00, 178.99it/s]

[Feature Set: xydi_3] Epoch [161/250] - Avg Loss: 0.0192
Epoch 162/250: 100%| | 570/570 [00:03<00:00, 176.69it/s]

[Feature Set: xydi_3] Epoch [162/250] - Avg Loss: 0.0466
Epoch 163/250: 100%| | 570/570 [00:03<00:00, 180.50it/s]

[Feature Set: xydi_3] Epoch [163/250] - Avg Loss: 0.0112
Epoch 164/250: 100%| | 570/570 [00:03<00:00, 179.28it/s]

[Feature Set: xydi_3] Epoch [164/250] - Avg Loss: 0.0109
Epoch 165/250: 100%| | 570/570 [00:03<00:00, 175.42it/s]

[Feature Set: xydi_3] Epoch [165/250] - Avg Loss: 0.0202
Epoch 166/250: 100%| | 570/570 [00:03<00:00, 177.58it/s]

[Feature Set: xydi_3] Epoch [166/250] - Avg Loss: 0.0123
Epoch 167/250: 100%| | 570/570 [00:03<00:00, 174.14it/s]

[Feature Set: xydi_3] Epoch [167/250] - Avg Loss: 0.0137
Epoch 168/250: 100%| | 570/570 [00:03<00:00, 177.21it/s]

[Feature Set: xydi_3] Epoch [168/250] - Avg Loss: 0.0256
Epoch 169/250: 100%| | 570/570 [00:03<00:00, 173.14it/s]

[Feature Set: xydi_3] Epoch [169/250] - Avg Loss: 0.0690
Epoch 170/250: 100%| | 570/570 [00:03<00:00, 176.52it/s]

[Feature Set: xydi_3] Epoch [170/250] - Avg Loss: 0.0065
Epoch 171/250: 100%| | 570/570 [00:03<00:00, 174.73it/s]

[Feature Set: xydi_3] Epoch [171/250] - Avg Loss: 0.0137
Epoch 172/250: 100%| | 570/570 [00:03<00:00, 178.02it/s]

[Feature Set: xydi_3] Epoch [172/250] - Avg Loss: 0.0944
Epoch 173/250: 100%| | 570/570 [00:03<00:00, 176.53it/s]

[Feature Set: xydi_3] Epoch [173/250] - Avg Loss: 0.0106
Epoch 174/250: 100%| | 570/570 [00:03<00:00, 176.92it/s]

[Feature Set: xydi_3] Epoch [174/250] - Avg Loss: 0.0078
Epoch 175/250: 100%| | 570/570 [00:03<00:00, 176.65it/s]

[Feature Set: xydi_3] Epoch [175/250] - Avg Loss: 0.0139
Epoch 176/250: 100%| | 570/570 [00:03<00:00, 174.39it/s]

[Feature Set: xydi_3] Epoch [176/250] - Avg Loss: 0.0544
Epoch 177/250: 100%| | 570/570 [00:03<00:00, 171.91it/s]

[Feature Set: xydi_3] Epoch [177/250] - Avg Loss: 0.0368
Epoch 178/250: 100%| | 570/570 [00:03<00:00, 173.74it/s]

[Feature Set: xydi_3] Epoch [178/250] - Avg Loss: 0.0160
Epoch 179/250: 100%| | 570/570 [00:03<00:00, 176.18it/s]

[Feature Set: xydi_3] Epoch [179/250] - Avg Loss: 0.0078
Epoch 180/250: 100%| | 570/570 [00:03<00:00, 179.67it/s]

[Feature Set: xydi_3] Epoch [180/250] - Avg Loss: 0.0056
Epoch 181/250: 100%| | 570/570 [00:03<00:00, 173.94it/s]

[Feature Set: xydi_3] Epoch [181/250] - Avg Loss: 0.0314
Epoch 182/250: 100%| | 570/570 [00:03<00:00, 179.02it/s]

[Feature Set: xydi_3] Epoch [182/250] - Avg Loss: 0.0265
Epoch 183/250: 100%| | 570/570 [00:03<00:00, 166.57it/s]

[Feature Set: xydi_3] Epoch [183/250] - Avg Loss: 0.0337
Epoch 184/250: 100%| | 570/570 [00:03<00:00, 178.30it/s]

[Feature Set: xydi_3] Epoch [184/250] - Avg Loss: 0.0211
Epoch 185/250: 100%| | 570/570 [00:03<00:00, 181.29it/s]

[Feature Set: xydi_3] Epoch [185/250] - Avg Loss: 0.0251
Epoch 186/250: 100%| | 570/570 [00:03<00:00, 179.74it/s]

[Feature Set: xydi_3] Epoch [186/250] - Avg Loss: 0.0634
Epoch 187/250: 100%| | 570/570 [00:03<00:00, 167.27it/s]

[Feature Set: xydi_3] Epoch [187/250] - Avg Loss: 0.0119
Epoch 188/250: 100%| | 570/570 [00:03<00:00, 173.46it/s]

[Feature Set: xydi_3] Epoch [188/250] - Avg Loss: 0.0189
Epoch 189/250: 100%| | 570/570 [00:03<00:00, 181.07it/s]

[Feature Set: xydi_3] Epoch [189/250] - Avg Loss: 0.0350
Epoch 190/250: 100%| | 570/570 [00:03<00:00, 172.05it/s]

[Feature Set: xydi_3] Epoch [190/250] - Avg Loss: 0.0188
Epoch 191/250: 100%| | 570/570 [00:03<00:00, 180.16it/s]

[Feature Set: xydi_3] Epoch [191/250] - Avg Loss: 0.0842
Epoch 192/250: 100%| | 570/570 [00:03<00:00, 182.43it/s]

[Feature Set: xydi_3] Epoch [192/250] - Avg Loss: 0.0919
Epoch 193/250: 100%| | 570/570 [00:03<00:00, 181.65it/s]

[Feature Set: xydi_3] Epoch [193/250] - Avg Loss: 0.0078
Epoch 194/250: 100%| | 570/570 [00:03<00:00, 174.64it/s]

[Feature Set: xydi_3] Epoch [194/250] - Avg Loss: 0.0132
Epoch 195/250: 100%| | 570/570 [00:03<00:00, 174.34it/s]

[Feature Set: xydi_3] Epoch [195/250] - Avg Loss: 0.0458
Epoch 196/250: 100%| | 570/570 [00:03<00:00, 177.97it/s]

[Feature Set: xydi_3] Epoch [196/250] - Avg Loss: 0.0143
Epoch 197/250: 100%| | 570/570 [00:03<00:00, 172.77it/s]

[Feature Set: xydi_3] Epoch [197/250] - Avg Loss: 0.0147
Epoch 198/250: 100%| | 570/570 [00:03<00:00, 176.65it/s]

[Feature Set: xydi_3] Epoch [198/250] - Avg Loss: 0.0064
Epoch 199/250: 100%| | 570/570 [00:03<00:00, 176.61it/s]

[Feature Set: xydi_3] Epoch [199/250] - Avg Loss: 0.0407
Epoch 200/250: 100%| | 570/570 [00:03<00:00, 177.23it/s]

[Feature Set: xydi_3] Epoch [200/250] - Avg Loss: 0.0244
Epoch 201/250: 100%| | 570/570 [00:03<00:00, 167.57it/s]

[Feature Set: xydi_3] Epoch [201/250] - Avg Loss: 0.0068
Epoch 202/250: 100%| | 570/570 [00:03<00:00, 174.16it/s]

[Feature Set: xydi_3] Epoch [202/250] - Avg Loss: 0.0028
Epoch 203/250: 100%| | 570/570 [00:03<00:00, 178.67it/s]

[Feature Set: xydi_3] Epoch [203/250] - Avg Loss: 0.0017
Epoch 204/250: 100%| | 570/570 [00:03<00:00, 177.84it/s]

[Feature Set: xydi_3] Epoch [204/250] - Avg Loss: 0.0089
Epoch 205/250: 100%| | 570/570 [00:03<00:00, 178.42it/s]

[Feature Set: xydi_3] Epoch [205/250] - Avg Loss: 0.0034
Epoch 206/250: 100%| | 570/570 [00:03<00:00, 170.23it/s]

[Feature Set: xydi_3] Epoch [206/250] - Avg Loss: 0.0013
Epoch 207/250: 100%| | 570/570 [00:03<00:00, 179.05it/s]

[Feature Set: xydi_3] Epoch [207/250] - Avg Loss: 0.0011
Epoch 208/250: 100%| | 570/570 [00:03<00:00, 180.17it/s]

[Feature Set: xydi_3] Epoch [208/250] - Avg Loss: 0.1287
Epoch 209/250: 100%| | 570/570 [00:03<00:00, 182.17it/s]

[Feature Set: xydi_3] Epoch [209/250] - Avg Loss: 0.0870
Epoch 210/250: 100%| | 570/570 [00:03<00:00, 179.84it/s]

[Feature Set: xydi_3] Epoch [210/250] - Avg Loss: 0.0189
Epoch 211/250: 100%| | 570/570 [00:03<00:00, 175.75it/s]

[Feature Set: xydi_3] Epoch [211/250] - Avg Loss: 0.0162
Epoch 212/250: 100%| | 570/570 [00:03<00:00, 180.70it/s]

[Feature Set: xydi_3] Epoch [212/250] - Avg Loss: 0.0137
Epoch 213/250: 100%| | 570/570 [00:03<00:00, 181.45it/s]

[Feature Set: xydi_3] Epoch [213/250] - Avg Loss: 0.0045
Epoch 214/250: 100%| | 570/570 [00:03<00:00, 179.25it/s]

[Feature Set: xydi_3] Epoch [214/250] - Avg Loss: 0.0026
Epoch 215/250: 100%| | 570/570 [00:03<00:00, 181.90it/s]

[Feature Set: xydi_3] Epoch [215/250] - Avg Loss: 0.0014
Epoch 216/250: 100%| | 570/570 [00:03<00:00, 182.16it/s]

[Feature Set: xydi_3] Epoch [216/250] - Avg Loss: 0.0029
Epoch 217/250: 100%| | 570/570 [00:03<00:00, 180.55it/s]

[Feature Set: xydi_3] Epoch [217/250] - Avg Loss: 0.0176
Epoch 218/250: 100%| | 570/570 [00:03<00:00, 182.59it/s]

[Feature Set: xydi_3] Epoch [218/250] - Avg Loss: 0.0793
Epoch 219/250: 100%| | 570/570 [00:03<00:00, 182.88it/s]

[Feature Set: xydi_3] Epoch [219/250] - Avg Loss: 0.0673
Epoch 220/250: 100%| | 570/570 [00:03<00:00, 181.26it/s]

[Feature Set: xydi_3] Epoch [220/250] - Avg Loss: 0.0110
Epoch 221/250: 100%| | 570/570 [00:03<00:00, 180.38it/s]

[Feature Set: xydi_3] Epoch [221/250] - Avg Loss: 0.0137
Epoch 222/250: 100%| | 570/570 [00:03<00:00, 182.00it/s]

[Feature Set: xydi_3] Epoch [222/250] - Avg Loss: 0.0057
Epoch 223/250: 100%| | 570/570 [00:03<00:00, 182.26it/s]

[Feature Set: xydi_3] Epoch [223/250] - Avg Loss: 0.0054
Epoch 224/250: 100%| | 570/570 [00:03<00:00, 182.42it/s]

[Feature Set: xydi_3] Epoch [224/250] - Avg Loss: 0.0090
Epoch 225/250: 100%| | 570/570 [00:03<00:00, 181.56it/s]

[Feature Set: xydi_3] Epoch [225/250] - Avg Loss: 0.0754
Epoch 226/250: 100%| | 570/570 [00:03<00:00, 181.89it/s]

[Feature Set: xydi_3] Epoch [226/250] - Avg Loss: 0.0874
Epoch 227/250: 100%| | 570/570 [00:03<00:00, 181.05it/s]

[Feature Set: xydi_3] Epoch [227/250] - Avg Loss: 0.0277
Epoch 228/250: 100%| | 570/570 [00:03<00:00, 180.26it/s]

[Feature Set: xydi_3] Epoch [228/250] - Avg Loss: 0.0291
Epoch 229/250: 100%| | 570/570 [00:03<00:00, 180.97it/s]

[Feature Set: xydi_3] Epoch [229/250] - Avg Loss: 0.0098
Epoch 230/250: 100%| | 570/570 [00:03<00:00, 181.63it/s]

[Feature Set: xydi_3] Epoch [230/250] - Avg Loss: 0.0081
Epoch 231/250: 100%| | 570/570 [00:03<00:00, 182.49it/s]

[Feature Set: xydi_3] Epoch [231/250] - Avg Loss: 0.0083
Epoch 232/250: 100%| | 570/570 [00:03<00:00, 180.39it/s]

[Feature Set: xydi_3] Epoch [232/250] - Avg Loss: 0.0081
Epoch 233/250: 100%| | 570/570 [00:03<00:00, 180.69it/s]

[Feature Set: xydi_3] Epoch [233/250] - Avg Loss: 0.0040
Epoch 234/250: 100%| | 570/570 [00:03<00:00, 181.42it/s]

[Feature Set: xydi_3] Epoch [234/250] - Avg Loss: 0.0052
Epoch 235/250: 100%| | 570/570 [00:03<00:00, 175.15it/s]

[Feature Set: xydi_3] Epoch [235/250] - Avg Loss: 0.0798
Epoch 236/250: 100%| | 570/570 [00:03<00:00, 177.97it/s]

[Feature Set: xydi_3] Epoch [236/250] - Avg Loss: 0.0852
Epoch 237/250: 100%| | 570/570 [00:03<00:00, 179.48it/s]

[Feature Set: xydi_3] Epoch [237/250] - Avg Loss: 0.0079
Epoch 238/250: 100%| | 570/570 [00:03<00:00, 176.35it/s]

[Feature Set: xydi_3] Epoch [238/250] - Avg Loss: 0.0035
Epoch 239/250: 100%| | 570/570 [00:03<00:00, 179.35it/s]

[Feature Set: xydi_3] Epoch [239/250] - Avg Loss: 0.0036
Epoch 240/250: 100%| | 570/570 [00:03<00:00, 181.50it/s]

[Feature Set: xydi_3] Epoch [240/250] - Avg Loss: 0.0193
Epoch 241/250: 100%| | 570/570 [00:03<00:00, 180.57it/s]

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[Feature Set: xydi_3] Epoch [241/250] - Avg Loss: 0.0356
Epoch 242/250: 100%|      | 570/570 [00:03<00:00, 179.53it/s]

[Feature Set: xydi_3] Epoch [242/250] - Avg Loss: 0.0083
Epoch 243/250: 100%|      | 570/570 [00:03<00:00, 178.27it/s]

[Feature Set: xydi_3] Epoch [243/250] - Avg Loss: 0.0473
Epoch 244/250: 100%|      | 570/570 [00:03<00:00, 181.15it/s]

[Feature Set: xydi_3] Epoch [244/250] - Avg Loss: 0.0096
Epoch 245/250: 100%|      | 570/570 [00:03<00:00, 179.22it/s]

[Feature Set: xydi_3] Epoch [245/250] - Avg Loss: 0.0045
Epoch 246/250: 100%|      | 570/570 [00:03<00:00, 177.05it/s]

[Feature Set: xydi_3] Epoch [246/250] - Avg Loss: 0.0075
Epoch 247/250: 100%|      | 570/570 [00:03<00:00, 179.87it/s]

[Feature Set: xydi_3] Epoch [247/250] - Avg Loss: 0.0140
Epoch 248/250: 100%|      | 570/570 [00:03<00:00, 176.84it/s]

[Feature Set: xydi_3] Epoch [248/250] - Avg Loss: 0.1296
Epoch 249/250: 100%|      | 570/570 [00:03<00:00, 168.93it/s]

[Feature Set: xydi_3] Epoch [249/250] - Avg Loss: 0.0490
Epoch 250/250: 100%|      | 570/570 [00:03<00:00, 179.02it/s]

[Feature Set: xydi_3] Epoch [250/250] - Avg Loss: 0.0120
[Eval] xydi_3: 100%|      | 143/143 [00:00<00:00, 336.63it/s]

```

```

[2]: df_results = pd.DataFrame(results)
      print(df_results)

```

	Feature_Set	Accuracy	Macro_F1	Weighted_F1
0	xydd_4	0.510490	0.497490	0.529706
1	xydsc_5	0.573427	0.502481	0.577368
2	xydi_3	0.538462	0.509051	0.556948