

0724-classical_model_0

July 24, 2023

```
[ ]: import torch
import torch.nn as nn
import torch.optim as optim
```

```
[ ]: import numpy as np
```

```
[ ]: import sys
sys.path.append('.')

from my_code import functions as f
```

1 Data

```
[ ]: file_path = '../data/energies/Trial/Strings_Energies_10_000.txt' # Replace
    ↪with the actual path to your 'data.txt' file
string_list, number_list = f.read_data_file(file_path)
score_list = np.array(number_list)/100
angles_list = np.array([f.string_to_numbers(string) for string in string_list])
```

```
[ ]: X, Y, X_validation, Y_validation = f.create_validating_set(angles_list,
    ↪score_list, percentage=0.1)
```

```
[ ]: # Define the dataset
input_data = torch.tensor(X, dtype=torch.float32)
target_data = torch.tensor(Y, dtype=torch.float32).view(-1, 1)

# Define the validation set
input_validation = torch.tensor(X_validation, dtype=torch.float32)
target_validation = torch.tensor(Y_validation, dtype=torch.float32).view(-1, 1)
```

```
[ ]:
```

2 Classical model

```
[ ]: input_dim = input_data.size(1)

layers = [nn.Linear(input_dim*1, input_dim*2), nn.ReLU()]
layers += [nn.Linear(input_dim*2, input_dim*3), nn.ReLU()]
layers += [nn.Linear(input_dim*3, input_dim*3), nn.ReLU()]
layers += [nn.Linear(input_dim*3, input_dim*2), nn.ReLU()]
layers += [nn.Linear(input_dim*2, input_dim*1)]
layers += [nn.Linear(input_dim*1, input_dim*1), nn.ReLU()] * 2
layers += [nn.Linear(input_dim*1, 1)]
Net = nn.Sequential(*layers)

[ ]: # Create an instance of the network
model = Net

[ ]: import time

[ ]: # time
start_time = time.time()

# Define the loss function and optimizer
criterion = nn.MSELoss() # Mean Squared Error loss
optimizer = optim.Adam(model.parameters(), lr=0.001) # Adam optimizer with
↳ learning rate 0.001

# Training loop
num_epochs = 100
batch_size = 32

losses = []
losses_epochs = []
losses_epochs_validation = []

for epoch in range(num_epochs):
    # Shuffle the dataset
    indices = torch.randperm(input_data.size(0))
    input_data = input_data[indices]
    target_data = target_data[indices]

    losses_epochs.append(0)

    # Mini-batch training
    for i in range(0, input_data.size(0), batch_size):
        inputs = input_data[i:i+batch_size]
        targets = target_data[i:i+batch_size]
```

```

# Forward pass
outputs = model(inputs)

# Compute the loss
loss = criterion(outputs, targets)

# Backward pass and optimization
optimizer.zero_grad()
loss.backward()
optimizer.step()

# Store the loss
losses.append(loss.item())

# print('- Epoch [{}/{}], i: [{}/{}], Loss: {:.4f}'.format(epoch+1,
↪num_epochs, i, input_data.size(0), loss.item()))

# add to the epoch loss
losses_epochs[-1] += loss.item() / (input_data.size(0) / batch_size)

# Compute the validation loss
outputs_validation = model(input_validation)
loss_validation = criterion(outputs_validation, target_validation)
losses_epochs_validation.append(loss_validation.item())

# Print the loss for this epoch
print('Epoch [{}/{}], Loss: {:.4f}'.format(epoch+1, num_epochs,
↪losses_epochs[-1]))

# time
# Compute elapsed time and remaining time
elapsed_time = time.time() - start_time
avg_time_per_epoch = elapsed_time / (epoch + 1)
remaining_epochs = num_epochs - (epoch + 1)
estimated_remaining_time = avg_time_per_epoch * remaining_epochs

# Convert remaining time to hours, minutes, and seconds for better
↪readability
hours, remainder = divmod(estimated_remaining_time, 3600)
minutes, seconds = divmod(remainder, 60)

# Print the loss and remaining time for this epoch
print('Epoch [{}/{}], Loss: {:.4f}, Time remaining: ~{}h {}m {:.0f}s'.
↪format(
    epoch+1, num_epochs, losses_epochs[-1], hours, minutes, seconds))

```

Epoch [1/100], Loss: 9.8400
Epoch [1/100], Loss: 9.8400, Time remaining: ~0.0h 2.0m 1s
Epoch [2/100], Loss: 6.7713
Epoch [2/100], Loss: 6.7713, Time remaining: ~0.0h 1.0m 45s
Epoch [3/100], Loss: 6.4395
Epoch [3/100], Loss: 6.4395, Time remaining: ~0.0h 1.0m 41s
Epoch [4/100], Loss: 6.3310
Epoch [4/100], Loss: 6.3310, Time remaining: ~0.0h 1.0m 42s
Epoch [5/100], Loss: 6.1282
Epoch [5/100], Loss: 6.1282, Time remaining: ~0.0h 1.0m 41s
Epoch [6/100], Loss: 5.9993
Epoch [6/100], Loss: 5.9993, Time remaining: ~0.0h 1.0m 40s
Epoch [7/100], Loss: 5.7158
Epoch [7/100], Loss: 5.7158, Time remaining: ~0.0h 1.0m 43s
Epoch [8/100], Loss: 5.5200
Epoch [8/100], Loss: 5.5200, Time remaining: ~0.0h 1.0m 42s
Epoch [9/100], Loss: 5.4338
Epoch [9/100], Loss: 5.4338, Time remaining: ~0.0h 1.0m 42s
Epoch [10/100], Loss: 5.3472
Epoch [10/100], Loss: 5.3472, Time remaining: ~0.0h 1.0m 40s
Epoch [11/100], Loss: 5.3046
Epoch [11/100], Loss: 5.3046, Time remaining: ~0.0h 1.0m 39s
Epoch [12/100], Loss: 5.2499
Epoch [12/100], Loss: 5.2499, Time remaining: ~0.0h 1.0m 36s
Epoch [13/100], Loss: 5.2013
Epoch [13/100], Loss: 5.2013, Time remaining: ~0.0h 1.0m 35s
Epoch [14/100], Loss: 5.1552
Epoch [14/100], Loss: 5.1552, Time remaining: ~0.0h 1.0m 33s
Epoch [15/100], Loss: 5.1797
Epoch [15/100], Loss: 5.1797, Time remaining: ~0.0h 1.0m 31s
Epoch [16/100], Loss: 5.0949
Epoch [16/100], Loss: 5.0949, Time remaining: ~0.0h 1.0m 30s
Epoch [17/100], Loss: 5.0906
Epoch [17/100], Loss: 5.0906, Time remaining: ~0.0h 1.0m 29s
Epoch [18/100], Loss: 5.0977
Epoch [18/100], Loss: 5.0977, Time remaining: ~0.0h 1.0m 27s
Epoch [19/100], Loss: 5.0010
Epoch [19/100], Loss: 5.0010, Time remaining: ~0.0h 1.0m 26s
Epoch [20/100], Loss: 5.0142
Epoch [20/100], Loss: 5.0142, Time remaining: ~0.0h 1.0m 25s
Epoch [21/100], Loss: 4.9781
Epoch [21/100], Loss: 4.9781, Time remaining: ~0.0h 1.0m 23s
Epoch [22/100], Loss: 4.9691
Epoch [22/100], Loss: 4.9691, Time remaining: ~0.0h 1.0m 22s
Epoch [23/100], Loss: 4.9687
Epoch [23/100], Loss: 4.9687, Time remaining: ~0.0h 1.0m 21s
Epoch [24/100], Loss: 4.8896
Epoch [24/100], Loss: 4.8896, Time remaining: ~0.0h 1.0m 20s

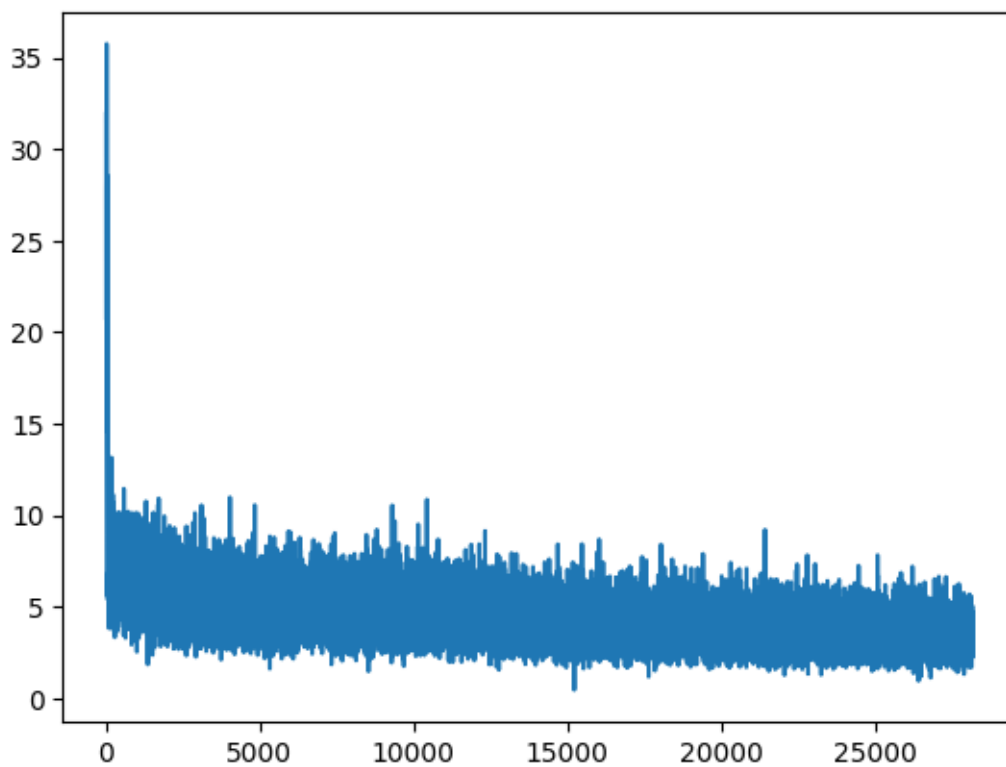
Epoch [25/100], Loss: 4.8869
Epoch [25/100], Loss: 4.8869, Time remaining: ~0.0h 1.0m 19s
Epoch [26/100], Loss: 4.8275
Epoch [26/100], Loss: 4.8275, Time remaining: ~0.0h 1.0m 17s
Epoch [27/100], Loss: 4.8205
Epoch [27/100], Loss: 4.8205, Time remaining: ~0.0h 1.0m 16s
Epoch [28/100], Loss: 4.8142
Epoch [28/100], Loss: 4.8142, Time remaining: ~0.0h 1.0m 15s
Epoch [29/100], Loss: 4.8279
Epoch [29/100], Loss: 4.8279, Time remaining: ~0.0h 1.0m 14s
Epoch [30/100], Loss: 4.8003
Epoch [30/100], Loss: 4.8003, Time remaining: ~0.0h 1.0m 13s
Epoch [31/100], Loss: 4.8259
Epoch [31/100], Loss: 4.8259, Time remaining: ~0.0h 1.0m 12s
Epoch [32/100], Loss: 4.7793
Epoch [32/100], Loss: 4.7793, Time remaining: ~0.0h 1.0m 11s
Epoch [33/100], Loss: 4.7353
Epoch [33/100], Loss: 4.7353, Time remaining: ~0.0h 1.0m 10s
Epoch [34/100], Loss: 4.7377
Epoch [34/100], Loss: 4.7377, Time remaining: ~0.0h 1.0m 9s
Epoch [35/100], Loss: 4.7452
Epoch [35/100], Loss: 4.7452, Time remaining: ~0.0h 1.0m 8s
Epoch [36/100], Loss: 4.7178
Epoch [36/100], Loss: 4.7178, Time remaining: ~0.0h 1.0m 7s
Epoch [37/100], Loss: 4.6957
Epoch [37/100], Loss: 4.6957, Time remaining: ~0.0h 1.0m 5s
Epoch [38/100], Loss: 4.6297
Epoch [38/100], Loss: 4.6297, Time remaining: ~0.0h 1.0m 4s
Epoch [39/100], Loss: 4.6446
Epoch [39/100], Loss: 4.6446, Time remaining: ~0.0h 1.0m 3s
Epoch [40/100], Loss: 4.5969
Epoch [40/100], Loss: 4.5969, Time remaining: ~0.0h 1.0m 2s
Epoch [41/100], Loss: 4.5712
Epoch [41/100], Loss: 4.5712, Time remaining: ~0.0h 1.0m 1s
Epoch [42/100], Loss: 4.5940
Epoch [42/100], Loss: 4.5940, Time remaining: ~0.0h 1.0m 0s
Epoch [43/100], Loss: 4.5336
Epoch [43/100], Loss: 4.5336, Time remaining: ~0.0h 0.0m 59s
Epoch [44/100], Loss: 4.5555
Epoch [44/100], Loss: 4.5555, Time remaining: ~0.0h 0.0m 58s
Epoch [45/100], Loss: 4.4708
Epoch [45/100], Loss: 4.4708, Time remaining: ~0.0h 0.0m 57s
Epoch [46/100], Loss: 4.4175
Epoch [46/100], Loss: 4.4175, Time remaining: ~0.0h 0.0m 56s
Epoch [47/100], Loss: 4.3701
Epoch [47/100], Loss: 4.3701, Time remaining: ~0.0h 0.0m 55s
Epoch [48/100], Loss: 4.3437
Epoch [48/100], Loss: 4.3437, Time remaining: ~0.0h 0.0m 54s

Epoch [49/100], Loss: 4.3106
Epoch [49/100], Loss: 4.3106, Time remaining: ~0.0h 0.0m 53s
Epoch [50/100], Loss: 4.2622
Epoch [50/100], Loss: 4.2622, Time remaining: ~0.0h 0.0m 52s
Epoch [51/100], Loss: 4.2477
Epoch [51/100], Loss: 4.2477, Time remaining: ~0.0h 0.0m 51s
Epoch [52/100], Loss: 4.2034
Epoch [52/100], Loss: 4.2034, Time remaining: ~0.0h 0.0m 49s
Epoch [53/100], Loss: 4.1112
Epoch [53/100], Loss: 4.1112, Time remaining: ~0.0h 0.0m 48s
Epoch [54/100], Loss: 4.1131
Epoch [54/100], Loss: 4.1131, Time remaining: ~0.0h 0.0m 47s
Epoch [55/100], Loss: 4.1063
Epoch [55/100], Loss: 4.1063, Time remaining: ~0.0h 0.0m 46s
Epoch [56/100], Loss: 4.1018
Epoch [56/100], Loss: 4.1018, Time remaining: ~0.0h 0.0m 45s
Epoch [57/100], Loss: 4.0732
Epoch [57/100], Loss: 4.0732, Time remaining: ~0.0h 0.0m 44s
Epoch [58/100], Loss: 4.0200
Epoch [58/100], Loss: 4.0200, Time remaining: ~0.0h 0.0m 43s
Epoch [59/100], Loss: 3.9832
Epoch [59/100], Loss: 3.9832, Time remaining: ~0.0h 0.0m 42s
Epoch [60/100], Loss: 3.9857
Epoch [60/100], Loss: 3.9857, Time remaining: ~0.0h 0.0m 41s
Epoch [61/100], Loss: 3.9832
Epoch [61/100], Loss: 3.9832, Time remaining: ~0.0h 0.0m 40s
Epoch [62/100], Loss: 3.9548
Epoch [62/100], Loss: 3.9548, Time remaining: ~0.0h 0.0m 39s
Epoch [63/100], Loss: 3.9445
Epoch [63/100], Loss: 3.9445, Time remaining: ~0.0h 0.0m 38s
Epoch [64/100], Loss: 3.8859
Epoch [64/100], Loss: 3.8859, Time remaining: ~0.0h 0.0m 37s
Epoch [65/100], Loss: 3.8926
Epoch [65/100], Loss: 3.8926, Time remaining: ~0.0h 0.0m 36s
Epoch [66/100], Loss: 3.8857
Epoch [66/100], Loss: 3.8857, Time remaining: ~0.0h 0.0m 35s
Epoch [67/100], Loss: 3.8339
Epoch [67/100], Loss: 3.8339, Time remaining: ~0.0h 0.0m 34s
Epoch [68/100], Loss: 3.8323
Epoch [68/100], Loss: 3.8323, Time remaining: ~0.0h 0.0m 33s
Epoch [69/100], Loss: 3.8280
Epoch [69/100], Loss: 3.8280, Time remaining: ~0.0h 0.0m 32s
Epoch [70/100], Loss: 3.7972
Epoch [70/100], Loss: 3.7972, Time remaining: ~0.0h 0.0m 31s
Epoch [71/100], Loss: 3.7794
Epoch [71/100], Loss: 3.7794, Time remaining: ~0.0h 0.0m 30s
Epoch [72/100], Loss: 3.7928
Epoch [72/100], Loss: 3.7928, Time remaining: ~0.0h 0.0m 29s

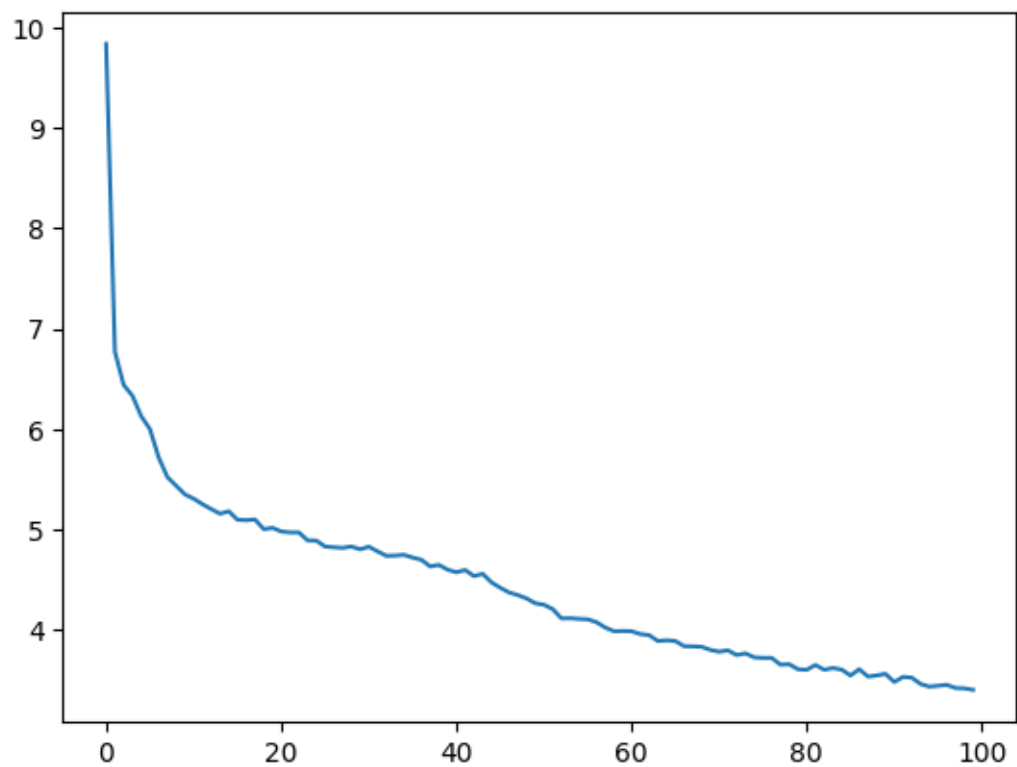
Epoch [73/100], Loss: 3.7459
Epoch [73/100], Loss: 3.7459, Time remaining: ~0.0h 0.0m 28s
Epoch [74/100], Loss: 3.7624
Epoch [74/100], Loss: 3.7624, Time remaining: ~0.0h 0.0m 27s
Epoch [75/100], Loss: 3.7231
Epoch [75/100], Loss: 3.7231, Time remaining: ~0.0h 0.0m 26s
Epoch [76/100], Loss: 3.7173
Epoch [76/100], Loss: 3.7173, Time remaining: ~0.0h 0.0m 25s
Epoch [77/100], Loss: 3.7173
Epoch [77/100], Loss: 3.7173, Time remaining: ~0.0h 0.0m 24s
Epoch [78/100], Loss: 3.6499
Epoch [78/100], Loss: 3.6499, Time remaining: ~0.0h 0.0m 23s
Epoch [79/100], Loss: 3.6543
Epoch [79/100], Loss: 3.6543, Time remaining: ~0.0h 0.0m 22s
Epoch [80/100], Loss: 3.6040
Epoch [80/100], Loss: 3.6040, Time remaining: ~0.0h 0.0m 21s
Epoch [81/100], Loss: 3.5987
Epoch [81/100], Loss: 3.5987, Time remaining: ~0.0h 0.0m 20s
Epoch [82/100], Loss: 3.6465
Epoch [82/100], Loss: 3.6465, Time remaining: ~0.0h 0.0m 19s
Epoch [83/100], Loss: 3.5989
Epoch [83/100], Loss: 3.5989, Time remaining: ~0.0h 0.0m 18s
Epoch [84/100], Loss: 3.6165
Epoch [84/100], Loss: 3.6165, Time remaining: ~0.0h 0.0m 17s
Epoch [85/100], Loss: 3.6006
Epoch [85/100], Loss: 3.6006, Time remaining: ~0.0h 0.0m 16s
Epoch [86/100], Loss: 3.5417
Epoch [86/100], Loss: 3.5417, Time remaining: ~0.0h 0.0m 14s
Epoch [87/100], Loss: 3.6044
Epoch [87/100], Loss: 3.6044, Time remaining: ~0.0h 0.0m 13s
Epoch [88/100], Loss: 3.5309
Epoch [88/100], Loss: 3.5309, Time remaining: ~0.0h 0.0m 12s
Epoch [89/100], Loss: 3.5422
Epoch [89/100], Loss: 3.5422, Time remaining: ~0.0h 0.0m 11s
Epoch [90/100], Loss: 3.5583
Epoch [90/100], Loss: 3.5583, Time remaining: ~0.0h 0.0m 10s
Epoch [91/100], Loss: 3.4771
Epoch [91/100], Loss: 3.4771, Time remaining: ~0.0h 0.0m 9s
Epoch [92/100], Loss: 3.5279
Epoch [92/100], Loss: 3.5279, Time remaining: ~0.0h 0.0m 8s
Epoch [93/100], Loss: 3.5207
Epoch [93/100], Loss: 3.5207, Time remaining: ~0.0h 0.0m 7s
Epoch [94/100], Loss: 3.4576
Epoch [94/100], Loss: 3.4576, Time remaining: ~0.0h 0.0m 6s
Epoch [95/100], Loss: 3.4308
Epoch [95/100], Loss: 3.4308, Time remaining: ~0.0h 0.0m 5s
Epoch [96/100], Loss: 3.4395
Epoch [96/100], Loss: 3.4395, Time remaining: ~0.0h 0.0m 4s

```
Epoch [97/100], Loss: 3.4484
Epoch [97/100], Loss: 3.4484, Time remaining: ~0.0h 0.0m 3s
Epoch [98/100], Loss: 3.4172
Epoch [98/100], Loss: 3.4172, Time remaining: ~0.0h 0.0m 2s
Epoch [99/100], Loss: 3.4138
Epoch [99/100], Loss: 3.4138, Time remaining: ~0.0h 0.0m 1s
Epoch [100/100], Loss: 3.3987
Epoch [100/100], Loss: 3.3987, Time remaining: ~0.0h 0.0m 0s
```

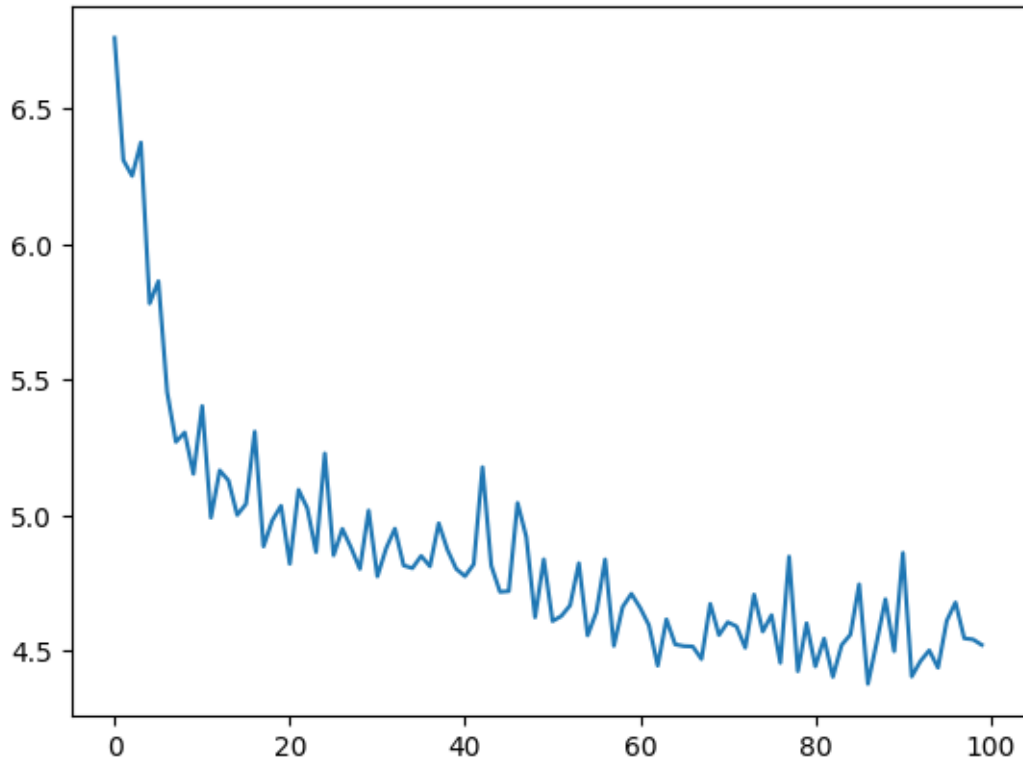
```
[ ]: #plot the loss
import matplotlib.pyplot as plt
plt.plot(losses)
plt.show()
```



```
[ ]: #plot the loss
import matplotlib.pyplot as plt
plt.plot(losses_epochs)
plt.show()
```

```
[ ]: import matplotlib.pyplot as plt
plt.plot(losses_epochs_validation)
plt.show()
```



```
[ ]: avg_loss = 0
for x, (i, t) in enumerate(zip((input_validation), target_validation)):
    loss = criterion(model(i), t)
    avg_loss += loss/len(target_validation)
    print('i: {}, target: {:.3f}, output: {:.3f}, loss: {:.3f}'.format(x, t,
    ↪item(), model(i).item(), loss))
    print('')

print('Average loss: {:.3f}'.format(avg_loss))
```

i: 0, target: 7.281, output: 4.675, loss: 6.794

i: 1, target: 1.623, output: 2.572, loss: 0.899

i: 2, target: 1.762, output: 4.843, loss: 9.496

i: 3, target: 7.714, output: 3.057, loss: 21.686

i: 4, target: 3.048, output: 4.997, loss: 3.797

i: 5, target: 3.537, output: 3.042, loss: 0.245

i: 6, target: 5.682, output: 6.373, loss: 0.478
i: 7, target: -0.972, output: 2.631, loss: 12.982
i: 8, target: 7.017, output: 4.914, loss: 4.425
i: 9, target: 5.406, output: 2.951, loss: 6.028
i: 10, target: 7.320, output: 3.608, loss: 13.780
i: 11, target: 3.691, output: 1.993, loss: 2.884
i: 12, target: 8.417, output: 6.689, loss: 2.984
i: 13, target: 8.875, output: 3.220, loss: 31.986
i: 14, target: 2.836, output: 3.226, loss: 0.152
i: 15, target: 3.278, output: 3.210, loss: 0.005
i: 16, target: 4.095, output: 4.441, loss: 0.120
i: 17, target: 2.687, output: 4.551, loss: 3.471
i: 18, target: 7.407, output: 4.427, loss: 8.881
i: 19, target: 5.030, output: 4.321, loss: 0.504
i: 20, target: 3.266, output: 4.487, loss: 1.491
i: 21, target: 1.655, output: 3.101, loss: 2.093
i: 22, target: 1.365, output: 4.979, loss: 13.057
i: 23, target: 4.745, output: 3.501, loss: 1.546
i: 24, target: -0.851, output: 2.580, loss: 11.770
i: 25, target: 4.371, output: 5.600, loss: 1.511
i: 26, target: 2.601, output: 5.664, loss: 9.383
i: 27, target: 2.875, output: 2.970, loss: 0.009
i: 28, target: 5.937, output: 4.560, loss: 1.896
i: 29, target: 6.940, output: 5.027, loss: 3.661

i: 30, target: 4.583, output: 6.076, loss: 2.230
i: 31, target: 2.660, output: 3.783, loss: 1.261
i: 32, target: 3.708, output: 4.792, loss: 1.176
i: 33, target: 4.242, output: 3.659, loss: 0.340
i: 34, target: 3.939, output: 2.400, loss: 2.368
i: 35, target: 5.856, output: 2.754, loss: 9.621
i: 36, target: 8.023, output: 3.211, loss: 23.152
i: 37, target: 6.219, output: 6.492, loss: 0.075
i: 38, target: 2.497, output: 2.665, loss: 0.028
i: 39, target: 7.049, output: 6.547, loss: 0.252
i: 40, target: -0.176, output: 2.280, loss: 6.032
i: 41, target: 4.750, output: 2.345, loss: 5.782
i: 42, target: 1.628, output: 3.181, loss: 2.411
i: 43, target: 3.786, output: 8.265, loss: 20.058
i: 44, target: 4.791, output: 7.170, loss: 5.659
i: 45, target: 4.155, output: 2.147, loss: 4.031
i: 46, target: 2.451, output: 2.376, loss: 0.006
i: 47, target: 1.725, output: 2.102, loss: 0.142
i: 48, target: 5.116, output: 7.219, loss: 4.423
i: 49, target: 0.799, output: 0.903, loss: 0.011
i: 50, target: -0.817, output: 2.122, loss: 8.640
i: 51, target: 2.776, output: 2.812, loss: 0.001
i: 52, target: 7.850, output: 7.448, loss: 0.162
i: 53, target: 4.321, output: 4.948, loss: 0.393

i: 54, target: 2.629, output: 2.440, loss: 0.036
i: 55, target: 5.729, output: 6.061, loss: 0.111
i: 56, target: 3.355, output: 5.530, loss: 4.730
i: 57, target: 6.044, output: 6.653, loss: 0.371
i: 58, target: -0.843, output: 1.577, loss: 5.858
i: 59, target: 7.351, output: 5.268, loss: 4.339
i: 60, target: 8.671, output: 5.487, loss: 10.136
i: 61, target: 8.472, output: 6.036, loss: 5.938
i: 62, target: 5.950, output: 5.268, loss: 0.466
i: 63, target: 0.388, output: 1.756, loss: 1.873
i: 64, target: 2.901, output: 3.965, loss: 1.133
i: 65, target: 6.770, output: 4.352, loss: 5.850
i: 66, target: 4.883, output: 4.972, loss: 0.008
i: 67, target: 2.049, output: 4.712, loss: 7.090
i: 68, target: 4.118, output: 2.620, loss: 2.245
i: 69, target: 4.097, output: 6.685, loss: 6.697
i: 70, target: 1.567, output: 2.177, loss: 0.373
i: 71, target: 7.060, output: 6.431, loss: 0.395
i: 72, target: 3.633, output: 4.464, loss: 0.690
i: 73, target: 4.979, output: 2.256, loss: 7.416
i: 74, target: 4.433, output: 6.041, loss: 2.585
i: 75, target: 2.076, output: 2.849, loss: 0.597
i: 76, target: 9.080, output: 7.366, loss: 2.940
i: 77, target: 1.857, output: 1.954, loss: 0.009

i: 78, target: 1.115, output: 2.833, loss: 2.950
i: 79, target: 1.098, output: 2.348, loss: 1.563
i: 80, target: 7.241, output: 2.831, loss: 19.449
i: 81, target: 5.239, output: 4.209, loss: 1.061
i: 82, target: 1.702, output: 4.911, loss: 10.297
i: 83, target: 6.350, output: 6.335, loss: 0.000
i: 84, target: 7.089, output: 6.650, loss: 0.193
i: 85, target: 2.374, output: 2.630, loss: 0.065
i: 86, target: 3.453, output: 5.555, loss: 4.419
i: 87, target: 0.890, output: 2.359, loss: 2.160
i: 88, target: 8.277, output: 5.777, loss: 6.250
i: 89, target: 1.374, output: 2.616, loss: 1.543
i: 90, target: 2.006, output: 3.907, loss: 3.617
i: 91, target: 4.319, output: 4.547, loss: 0.052
i: 92, target: 1.513, output: 3.737, loss: 4.950
i: 93, target: 6.606, output: 4.576, loss: 4.124
i: 94, target: 9.719, output: 6.334, loss: 11.452
i: 95, target: 1.589, output: 4.391, loss: 7.856
i: 96, target: 4.793, output: 0.942, loss: 14.832
i: 97, target: 4.331, output: 2.263, loss: 4.280
i: 98, target: 0.447, output: 3.938, loss: 12.188
i: 99, target: 1.276, output: 3.133, loss: 3.449
i: 100, target: 9.294, output: 5.973, loss: 11.027
i: 101, target: 3.332, output: 2.488, loss: 0.711

i: 102, target: 2.381, output: 2.167, loss: 0.045
i: 103, target: 2.523, output: 1.821, loss: 0.493
i: 104, target: 7.118, output: 5.420, loss: 2.883
i: 105, target: 5.225, output: 6.642, loss: 2.006
i: 106, target: 4.555, output: 2.429, loss: 4.520
i: 107, target: 5.091, output: 3.846, loss: 1.550
i: 108, target: 4.228, output: 4.726, loss: 0.248
i: 109, target: 7.227, output: 8.235, loss: 1.016
i: 110, target: 0.462, output: 1.547, loss: 1.176
i: 111, target: 2.668, output: 3.017, loss: 0.122
i: 112, target: 4.719, output: 3.757, loss: 0.927
i: 113, target: 5.867, output: 3.051, loss: 7.929
i: 114, target: 0.099, output: 4.375, loss: 18.280
i: 115, target: 2.852, output: 2.498, loss: 0.125
i: 116, target: 5.005, output: 2.661, loss: 5.494
i: 117, target: 1.722, output: 3.995, loss: 5.164
i: 118, target: 8.754, output: 5.448, loss: 10.930
i: 119, target: 0.595, output: 1.098, loss: 0.253
i: 120, target: 4.676, output: 4.124, loss: 0.305
i: 121, target: 5.493, output: 3.665, loss: 3.341
i: 122, target: 7.897, output: 8.125, loss: 0.052
i: 123, target: 1.298, output: 2.823, loss: 2.325
i: 124, target: 3.816, output: 4.191, loss: 0.141
i: 125, target: 2.148, output: 2.711, loss: 0.317

i: 126, target: 3.585, output: 4.749, loss: 1.355
i: 127, target: 5.077, output: 4.267, loss: 0.656
i: 128, target: 3.288, output: 3.391, loss: 0.011
i: 129, target: 5.916, output: 3.694, loss: 4.940
i: 130, target: 8.606, output: 7.245, loss: 1.850
i: 131, target: 1.669, output: 5.398, loss: 13.898
i: 132, target: 3.991, output: 4.797, loss: 0.650
i: 133, target: 3.062, output: 3.430, loss: 0.135
i: 134, target: 5.083, output: 3.705, loss: 1.899
i: 135, target: -0.495, output: 1.438, loss: 3.734
i: 136, target: 1.704, output: 2.454, loss: 0.562
i: 137, target: 7.542, output: 5.945, loss: 2.552
i: 138, target: 3.969, output: 2.974, loss: 0.990
i: 139, target: 1.320, output: 1.774, loss: 0.206
i: 140, target: 4.925, output: 2.222, loss: 7.305
i: 141, target: 6.857, output: 6.406, loss: 0.204
i: 142, target: -1.591, output: 3.866, loss: 29.778
i: 143, target: 7.494, output: 6.093, loss: 1.963
i: 144, target: 7.225, output: 5.174, loss: 4.208
i: 145, target: 6.255, output: 2.131, loss: 17.004
i: 146, target: 8.827, output: 1.666, loss: 51.282
i: 147, target: 2.906, output: 3.069, loss: 0.027
i: 148, target: 7.834, output: 4.520, loss: 10.985
i: 149, target: 5.512, output: 6.140, loss: 0.394

i: 150, target: 0.040, output: 4.924, loss: 23.851
i: 151, target: 4.877, output: 4.138, loss: 0.545
i: 152, target: 2.833, output: 2.439, loss: 0.155
i: 153, target: 9.249, output: 1.413, loss: 61.396
i: 154, target: 4.343, output: 5.987, loss: 2.705
i: 155, target: 4.043, output: 2.070, loss: 3.893
i: 156, target: 4.302, output: 3.471, loss: 0.689
i: 157, target: 4.632, output: 4.219, loss: 0.171
i: 158, target: 8.104, output: 8.954, loss: 0.722
i: 159, target: 5.650, output: 1.611, loss: 16.309
i: 160, target: 2.199, output: 2.043, loss: 0.024
i: 161, target: 1.163, output: 3.878, loss: 7.375
i: 162, target: 3.455, output: 3.395, loss: 0.004
i: 163, target: 5.948, output: 3.357, loss: 6.713
i: 164, target: 4.867, output: 5.835, loss: 0.938
i: 165, target: 3.423, output: 2.293, loss: 1.277
i: 166, target: 6.907, output: 5.303, loss: 2.575
i: 167, target: -0.609, output: 1.651, loss: 5.109
i: 168, target: 4.848, output: 1.718, loss: 9.797
i: 169, target: 2.939, output: 1.979, loss: 0.922
i: 170, target: 2.153, output: 1.631, loss: 0.272
i: 171, target: 2.546, output: 3.241, loss: 0.483
i: 172, target: 4.806, output: 5.704, loss: 0.806
i: 173, target: 3.754, output: 2.198, loss: 2.422

i: 174, target: 4.661, output: 3.830, loss: 0.690
i: 175, target: 5.857, output: 7.430, loss: 2.473
i: 176, target: 3.696, output: 1.579, loss: 4.481
i: 177, target: 5.634, output: 5.721, loss: 0.008
i: 178, target: 4.455, output: 4.426, loss: 0.001
i: 179, target: -1.938, output: 2.830, loss: 22.739
i: 180, target: 4.728, output: 3.494, loss: 1.522
i: 181, target: 7.255, output: 5.315, loss: 3.765
i: 182, target: 5.431, output: 3.948, loss: 2.199
i: 183, target: 7.776, output: 4.689, loss: 9.528
i: 184, target: 5.326, output: 3.367, loss: 3.838
i: 185, target: 6.574, output: 5.902, loss: 0.452
i: 186, target: 5.282, output: 1.851, loss: 11.773
i: 187, target: 2.229, output: 2.202, loss: 0.001
i: 188, target: 3.668, output: 3.074, loss: 0.352
i: 189, target: 6.524, output: 3.244, loss: 10.763
i: 190, target: 1.144, output: 3.106, loss: 3.851
i: 191, target: 4.934, output: 4.181, loss: 0.567
i: 192, target: 2.776, output: 1.720, loss: 1.114
i: 193, target: 5.165, output: 2.824, loss: 5.480
i: 194, target: 3.163, output: 5.240, loss: 4.316
i: 195, target: 1.536, output: 4.509, loss: 8.833
i: 196, target: 8.525, output: 4.189, loss: 18.802
i: 197, target: 5.197, output: 4.614, loss: 0.339

i: 198, target: 4.730, output: 4.340, loss: 0.152
i: 199, target: 1.210, output: 2.689, loss: 2.188
i: 200, target: 3.434, output: 3.621, loss: 0.035
i: 201, target: 1.564, output: 4.252, loss: 7.224
i: 202, target: 4.705, output: 3.351, loss: 1.834
i: 203, target: 2.521, output: 3.112, loss: 0.350
i: 204, target: 5.281, output: 4.695, loss: 0.344
i: 205, target: 3.154, output: 3.381, loss: 0.051
i: 206, target: 0.561, output: 3.806, loss: 10.531
i: 207, target: 8.397, output: 4.108, loss: 18.397
i: 208, target: 6.745, output: 4.501, loss: 5.036
i: 209, target: 4.465, output: 4.202, loss: 0.069
i: 210, target: 3.388, output: 2.828, loss: 0.314
i: 211, target: 1.205, output: 2.069, loss: 0.747
i: 212, target: 6.773, output: 7.247, loss: 0.225
i: 213, target: 8.678, output: 6.431, loss: 5.051
i: 214, target: 3.265, output: 3.065, loss: 0.040
i: 215, target: 2.093, output: 2.829, loss: 0.542
i: 216, target: 0.803, output: 2.217, loss: 2.000
i: 217, target: 3.362, output: 5.737, loss: 5.642
i: 218, target: 1.310, output: 1.995, loss: 0.469
i: 219, target: 6.859, output: 7.062, loss: 0.041
i: 220, target: 3.009, output: 2.792, loss: 0.047
i: 221, target: 8.456, output: 5.686, loss: 7.671

i: 222, target: 7.435, output: 2.837, loss: 21.141
i: 223, target: 9.253, output: 5.826, loss: 11.749
i: 224, target: 6.004, output: 4.731, loss: 1.621
i: 225, target: 0.400, output: 2.793, loss: 5.726
i: 226, target: 6.500, output: 1.171, loss: 28.393
i: 227, target: 2.632, output: 1.943, loss: 0.474
i: 228, target: 4.418, output: 4.813, loss: 0.156
i: 229, target: 2.833, output: 3.046, loss: 0.045
i: 230, target: 4.784, output: 4.680, loss: 0.011
i: 231, target: 4.153, output: 4.776, loss: 0.387
i: 232, target: 6.092, output: 2.595, loss: 12.226
i: 233, target: 5.873, output: 3.011, loss: 8.188
i: 234, target: 4.999, output: 3.509, loss: 2.221
i: 235, target: 4.723, output: 5.449, loss: 0.526
i: 236, target: 6.176, output: 4.205, loss: 3.886
i: 237, target: 2.091, output: 5.445, loss: 11.252
i: 238, target: 1.164, output: 1.764, loss: 0.360
i: 239, target: 7.601, output: 5.000, loss: 6.765
i: 240, target: 3.638, output: 4.046, loss: 0.167
i: 241, target: 0.355, output: 2.346, loss: 3.965
i: 242, target: 0.307, output: 1.835, loss: 2.334
i: 243, target: 1.984, output: 1.953, loss: 0.001
i: 244, target: 5.512, output: 4.301, loss: 1.467
i: 245, target: 7.615, output: 5.720, loss: 3.588

i: 246, target: 7.930, output: 6.560, loss: 1.876
i: 247, target: 1.510, output: 5.461, loss: 15.614
i: 248, target: 4.680, output: 4.819, loss: 0.019
i: 249, target: 4.027, output: 4.454, loss: 0.182
i: 250, target: 3.004, output: 4.593, loss: 2.525
i: 251, target: 7.861, output: 3.257, loss: 21.204
i: 252, target: 2.744, output: 4.981, loss: 5.004
i: 253, target: 4.976, output: 3.629, loss: 1.816
i: 254, target: 3.500, output: 3.432, loss: 0.005
i: 255, target: 0.984, output: 3.391, loss: 5.792
i: 256, target: 4.151, output: 2.965, loss: 1.406
i: 257, target: 6.821, output: 4.752, loss: 4.280
i: 258, target: 3.445, output: 4.641, loss: 1.431
i: 259, target: 0.955, output: 4.091, loss: 9.833
i: 260, target: 4.041, output: 2.821, loss: 1.490
i: 261, target: 7.204, output: 2.238, loss: 24.662
i: 262, target: 4.416, output: 4.791, loss: 0.140
i: 263, target: 4.892, output: 4.833, loss: 0.004
i: 264, target: 2.355, output: 2.544, loss: 0.036
i: 265, target: 3.320, output: 1.460, loss: 3.460
i: 266, target: 6.560, output: 5.268, loss: 1.670
i: 267, target: 1.900, output: 1.931, loss: 0.001
i: 268, target: 5.765, output: 4.331, loss: 2.056
i: 269, target: 3.364, output: 2.584, loss: 0.610

i: 270, target: 4.762, output: 5.398, loss: 0.404
i: 271, target: 4.713, output: 3.268, loss: 2.089
i: 272, target: 6.400, output: 6.051, loss: 0.122
i: 273, target: 6.393, output: 4.123, loss: 5.154
i: 274, target: 9.065, output: 9.078, loss: 0.000
i: 275, target: 0.683, output: 2.453, loss: 3.133
i: 276, target: 4.260, output: 2.408, loss: 3.430
i: 277, target: 6.910, output: 4.436, loss: 6.121
i: 278, target: 5.127, output: 6.163, loss: 1.074
i: 279, target: 6.495, output: 4.873, loss: 2.631
i: 280, target: 2.049, output: 1.939, loss: 0.012
i: 281, target: 7.029, output: 1.977, loss: 25.521
i: 282, target: 9.217, output: 6.032, loss: 10.143
i: 283, target: 6.621, output: 4.693, loss: 3.716
i: 284, target: 5.350, output: 6.991, loss: 2.695
i: 285, target: 6.682, output: 5.606, loss: 1.159
i: 286, target: 3.072, output: 2.578, loss: 0.244
i: 287, target: 3.029, output: 2.586, loss: 0.196
i: 288, target: 4.637, output: 3.879, loss: 0.575
i: 289, target: 4.759, output: 6.812, loss: 4.216
i: 290, target: 7.383, output: 5.672, loss: 2.927
i: 291, target: 9.040, output: 5.436, loss: 12.985
i: 292, target: 5.457, output: 4.059, loss: 1.957
i: 293, target: 0.326, output: 3.047, loss: 7.405

i: 294, target: 0.611, output: 1.721, loss: 1.233
i: 295, target: 9.091, output: 3.949, loss: 26.439
i: 296, target: 3.096, output: 4.805, loss: 2.923
i: 297, target: 1.572, output: 3.200, loss: 2.651
i: 298, target: 1.464, output: 6.208, loss: 22.503
i: 299, target: 5.414, output: 3.601, loss: 3.289
i: 300, target: 4.413, output: 3.207, loss: 1.453
i: 301, target: 5.817, output: 4.348, loss: 2.160
i: 302, target: 6.516, output: 6.997, loss: 0.231
i: 303, target: 1.442, output: 2.515, loss: 1.152
i: 304, target: 2.517, output: 2.457, loss: 0.004
i: 305, target: 2.936, output: 4.120, loss: 1.401
i: 306, target: 0.042, output: 4.599, loss: 20.764
i: 307, target: 2.997, output: 3.494, loss: 0.246
i: 308, target: -0.424, output: 4.136, loss: 20.791
i: 309, target: 3.678, output: 5.556, loss: 3.526
i: 310, target: 8.050, output: 8.172, loss: 0.015
i: 311, target: 9.262, output: 4.618, loss: 21.573
i: 312, target: 3.945, output: 4.051, loss: 0.011
i: 313, target: 0.091, output: 0.774, loss: 0.466
i: 314, target: 4.612, output: 4.023, loss: 0.347
i: 315, target: 5.954, output: 3.022, loss: 8.596
i: 316, target: 4.328, output: 5.419, loss: 1.190
i: 317, target: 3.102, output: 0.640, loss: 6.066

i: 318, target: 1.688, output: 2.658, loss: 0.940
i: 319, target: 9.073, output: 2.829, loss: 38.981
i: 320, target: 4.871, output: 3.713, loss: 1.342
i: 321, target: 1.025, output: 3.315, loss: 5.243
i: 322, target: 4.973, output: 3.807, loss: 1.359
i: 323, target: 5.528, output: 1.780, loss: 14.050
i: 324, target: 6.920, output: 5.057, loss: 3.469
i: 325, target: 2.382, output: 2.920, loss: 0.290
i: 326, target: 8.277, output: 6.048, loss: 4.966
i: 327, target: 6.099, output: 4.000, loss: 4.404
i: 328, target: -0.099, output: 1.756, loss: 3.439
i: 329, target: 1.965, output: 4.464, loss: 6.246
i: 330, target: 5.299, output: 5.329, loss: 0.001
i: 331, target: 2.119, output: 1.999, loss: 0.014
i: 332, target: 7.484, output: 4.522, loss: 8.773
i: 333, target: 2.043, output: 2.284, loss: 0.058
i: 334, target: 6.077, output: 3.117, loss: 8.762
i: 335, target: 8.644, output: 6.408, loss: 4.998
i: 336, target: 3.520, output: 2.145, loss: 1.890
i: 337, target: 5.027, output: 5.545, loss: 0.268
i: 338, target: 3.979, output: 3.620, loss: 0.128
i: 339, target: 9.428, output: 5.845, loss: 12.834
i: 340, target: 4.700, output: 3.129, loss: 2.467
i: 341, target: 3.099, output: 2.005, loss: 1.198

i: 342, target: 4.652, output: 5.697, loss: 1.093
i: 343, target: 0.590, output: 1.973, loss: 1.913
i: 344, target: 5.252, output: 4.236, loss: 1.033
i: 345, target: 7.064, output: 4.788, loss: 5.178
i: 346, target: 5.615, output: 4.279, loss: 1.787
i: 347, target: -0.244, output: 0.898, loss: 1.304
i: 348, target: 5.448, output: 1.663, loss: 14.326
i: 349, target: 2.778, output: 2.133, loss: 0.416
i: 350, target: 2.430, output: 2.313, loss: 0.013
i: 351, target: 5.113, output: 6.431, loss: 1.737
i: 352, target: 7.366, output: 4.655, loss: 7.347
i: 353, target: 6.861, output: 3.927, loss: 8.610
i: 354, target: 7.054, output: 5.294, loss: 3.097
i: 355, target: 1.685, output: 2.897, loss: 1.468
i: 356, target: 4.814, output: 4.793, loss: 0.000
i: 357, target: 5.207, output: 6.494, loss: 1.654
i: 358, target: 5.639, output: 3.316, loss: 5.397
i: 359, target: 1.926, output: 2.222, loss: 0.088
i: 360, target: 1.103, output: 5.037, loss: 15.475
i: 361, target: 5.758, output: 5.203, loss: 0.308
i: 362, target: 4.696, output: 4.343, loss: 0.125
i: 363, target: 7.036, output: 4.738, loss: 5.278
i: 364, target: 5.841, output: 5.786, loss: 0.003
i: 365, target: 3.595, output: 2.083, loss: 2.286

i: 366, target: 3.040, output: 2.283, loss: 0.574
i: 367, target: 3.910, output: 3.196, loss: 0.510
i: 368, target: 4.712, output: 1.802, loss: 8.465
i: 369, target: 7.462, output: 3.434, loss: 16.228
i: 370, target: 1.637, output: 4.236, loss: 6.754
i: 371, target: 5.386, output: 3.165, loss: 4.930
i: 372, target: 6.111, output: 6.402, loss: 0.085
i: 373, target: 5.195, output: 2.364, loss: 8.014
i: 374, target: 6.305, output: 4.890, loss: 2.002
i: 375, target: 4.552, output: 5.150, loss: 0.358
i: 376, target: 2.770, output: 1.988, loss: 0.611
i: 377, target: 1.232, output: 1.886, loss: 0.427
i: 378, target: 0.771, output: 4.590, loss: 14.583
i: 379, target: 6.811, output: 5.023, loss: 3.195
i: 380, target: 7.703, output: 6.487, loss: 1.477
i: 381, target: 3.824, output: 4.172, loss: 0.121
i: 382, target: 6.763, output: 3.327, loss: 11.809
i: 383, target: 4.806, output: 6.347, loss: 2.377
i: 384, target: 4.729, output: 2.441, loss: 5.235
i: 385, target: 4.954, output: 6.024, loss: 1.145
i: 386, target: 6.398, output: 5.781, loss: 0.380
i: 387, target: 3.655, output: 3.382, loss: 0.075
i: 388, target: 3.989, output: 1.854, loss: 4.559
i: 389, target: 2.403, output: 2.058, loss: 0.119

i: 390, target: 7.929, output: 6.710, loss: 1.487
i: 391, target: 4.012, output: 5.584, loss: 2.471
i: 392, target: 0.731, output: 2.548, loss: 3.302
i: 393, target: 3.638, output: 2.549, loss: 1.186
i: 394, target: 8.581, output: 7.893, loss: 0.474
i: 395, target: 1.952, output: 2.298, loss: 0.120
i: 396, target: -0.677, output: 0.745, loss: 2.022
i: 397, target: 5.541, output: 5.468, loss: 0.005
i: 398, target: 5.649, output: 6.652, loss: 1.006
i: 399, target: -0.738, output: 2.101, loss: 8.060
i: 400, target: 7.747, output: 5.513, loss: 4.992
i: 401, target: 1.896, output: 1.846, loss: 0.002
i: 402, target: 4.569, output: 2.277, loss: 5.251
i: 403, target: 5.029, output: 3.926, loss: 1.216
i: 404, target: 3.277, output: 5.932, loss: 7.046
i: 405, target: 1.354, output: 2.861, loss: 2.270
i: 406, target: 5.976, output: 5.138, loss: 0.702
i: 407, target: 8.586, output: 6.201, loss: 5.688
i: 408, target: 3.555, output: 2.729, loss: 0.683
i: 409, target: 0.427, output: 3.213, loss: 7.758
i: 410, target: 0.849, output: 2.435, loss: 2.517
i: 411, target: 5.082, output: 5.123, loss: 0.002
i: 412, target: 2.986, output: 4.817, loss: 3.353
i: 413, target: 2.956, output: 1.738, loss: 1.483

i: 414, target: 6.067, output: 3.193, loss: 8.259
i: 415, target: -0.215, output: 4.235, loss: 19.801
i: 416, target: 3.064, output: 3.059, loss: 0.000
i: 417, target: 4.601, output: 3.345, loss: 1.578
i: 418, target: 7.132, output: 7.693, loss: 0.315
i: 419, target: 7.392, output: 2.487, loss: 24.056
i: 420, target: 1.429, output: 1.678, loss: 0.062
i: 421, target: -0.575, output: 2.346, loss: 8.534
i: 422, target: 5.230, output: 5.943, loss: 0.508
i: 423, target: 8.389, output: 5.216, loss: 10.066
i: 424, target: 5.344, output: 3.795, loss: 2.399
i: 425, target: 2.129, output: 4.269, loss: 4.580
i: 426, target: 7.776, output: 4.624, loss: 9.934
i: 427, target: 5.904, output: 3.140, loss: 7.641
i: 428, target: 1.626, output: 5.168, loss: 12.541
i: 429, target: 7.558, output: 4.136, loss: 11.711
i: 430, target: 6.111, output: 4.262, loss: 3.418
i: 431, target: 5.765, output: 6.011, loss: 0.061
i: 432, target: 5.214, output: 1.947, loss: 10.679
i: 433, target: 3.098, output: 4.274, loss: 1.385
i: 434, target: 7.519, output: 4.776, loss: 7.522
i: 435, target: 8.264, output: 5.419, loss: 8.093
i: 436, target: 4.886, output: 4.393, loss: 0.243
i: 437, target: 2.319, output: 4.085, loss: 3.117

i: 438, target: 0.823, output: 3.475, loss: 7.033
i: 439, target: 3.769, output: 5.964, loss: 4.817
i: 440, target: -0.348, output: 0.940, loss: 1.660
i: 441, target: 4.494, output: 2.827, loss: 2.779
i: 442, target: 4.138, output: 5.334, loss: 1.431
i: 443, target: 5.786, output: 2.973, loss: 7.911
i: 444, target: 1.935, output: 4.745, loss: 7.893
i: 445, target: 1.380, output: 1.554, loss: 0.030
i: 446, target: 3.853, output: 6.434, loss: 6.661
i: 447, target: 3.885, output: 4.688, loss: 0.644
i: 448, target: 6.905, output: 6.342, loss: 0.317
i: 449, target: 5.397, output: 5.996, loss: 0.358
i: 450, target: 1.032, output: 1.961, loss: 0.863
i: 451, target: 4.285, output: 3.899, loss: 0.149
i: 452, target: 4.555, output: 5.712, loss: 1.338
i: 453, target: 9.282, output: 5.056, loss: 17.856
i: 454, target: 4.493, output: 2.847, loss: 2.709
i: 455, target: 6.321, output: 4.288, loss: 4.132
i: 456, target: 5.583, output: 4.912, loss: 0.450
i: 457, target: 1.024, output: 3.246, loss: 4.938
i: 458, target: 5.298, output: 3.876, loss: 2.021
i: 459, target: 3.737, output: 2.186, loss: 2.405
i: 460, target: 4.689, output: 5.520, loss: 0.692
i: 461, target: 4.474, output: 6.510, loss: 4.145

i: 462, target: 7.335, output: 4.843, loss: 6.207
i: 463, target: 1.348, output: 3.338, loss: 3.962
i: 464, target: 1.273, output: 2.979, loss: 2.909
i: 465, target: 1.448, output: 5.927, loss: 20.064
i: 466, target: 7.347, output: 4.642, loss: 7.317
i: 467, target: 7.600, output: 6.268, loss: 1.776
i: 468, target: 2.837, output: 5.212, loss: 5.643
i: 469, target: 1.360, output: 2.637, loss: 1.632
i: 470, target: 3.702, output: 2.808, loss: 0.799
i: 471, target: 6.640, output: 5.540, loss: 1.210
i: 472, target: 3.962, output: 4.233, loss: 0.073
i: 473, target: 8.028, output: 5.397, loss: 6.926
i: 474, target: 1.916, output: 1.930, loss: 0.000
i: 475, target: -0.141, output: 1.894, loss: 4.141
i: 476, target: 7.110, output: 3.901, loss: 10.301
i: 477, target: 1.622, output: 2.702, loss: 1.166
i: 478, target: 5.934, output: 4.994, loss: 0.884
i: 479, target: 4.172, output: 4.947, loss: 0.600
i: 480, target: 6.151, output: 6.435, loss: 0.081
i: 481, target: 2.258, output: 3.084, loss: 0.682
i: 482, target: 0.306, output: 2.420, loss: 4.469
i: 483, target: 6.256, output: 3.279, loss: 8.865
i: 484, target: 7.721, output: 2.554, loss: 26.697
i: 485, target: 6.729, output: 4.924, loss: 3.256

i: 486, target: 1.829, output: 2.001, loss: 0.029
i: 487, target: 3.360, output: 4.618, loss: 1.582
i: 488, target: 0.351, output: 2.590, loss: 5.013
i: 489, target: 1.312, output: 4.095, loss: 7.746
i: 490, target: 2.902, output: 4.221, loss: 1.739
i: 491, target: 2.837, output: 4.288, loss: 2.104
i: 492, target: 4.723, output: 5.512, loss: 0.624
i: 493, target: 2.708, output: 2.128, loss: 0.336
i: 494, target: 2.416, output: 3.187, loss: 0.594
i: 495, target: 4.567, output: 5.346, loss: 0.606
i: 496, target: 1.876, output: 1.227, loss: 0.421
i: 497, target: 5.892, output: 4.146, loss: 3.050
i: 498, target: 5.991, output: 2.849, loss: 9.867
i: 499, target: 2.891, output: 2.972, loss: 0.006
i: 500, target: 4.437, output: 6.125, loss: 2.850
i: 501, target: 2.173, output: 2.554, loss: 0.145
i: 502, target: 3.093, output: 3.512, loss: 0.175
i: 503, target: 4.047, output: 1.254, loss: 7.803
i: 504, target: 1.560, output: 1.882, loss: 0.104
i: 505, target: 6.625, output: 4.514, loss: 4.454
i: 506, target: 3.205, output: 2.465, loss: 0.547
i: 507, target: 0.555, output: 3.625, loss: 9.430
i: 508, target: 5.027, output: 5.736, loss: 0.503
i: 509, target: 8.758, output: 6.584, loss: 4.729

i: 510, target: 9.941, output: 5.226, loss: 22.234
i: 511, target: 3.882, output: 2.193, loss: 2.854
i: 512, target: 4.352, output: 4.639, loss: 0.083
i: 513, target: 4.073, output: 3.215, loss: 0.737
i: 514, target: 5.393, output: 6.795, loss: 1.964
i: 515, target: 9.103, output: 4.922, loss: 17.484
i: 516, target: 5.494, output: 5.545, loss: 0.003
i: 517, target: 5.569, output: 3.218, loss: 5.527
i: 518, target: 8.178, output: 4.707, loss: 12.047
i: 519, target: 3.531, output: 4.976, loss: 2.090
i: 520, target: 2.783, output: 3.341, loss: 0.311
i: 521, target: 3.379, output: 3.208, loss: 0.029
i: 522, target: 1.166, output: 3.460, loss: 5.261
i: 523, target: 1.367, output: 4.327, loss: 8.763
i: 524, target: 5.677, output: 3.261, loss: 5.835
i: 525, target: 8.794, output: 7.400, loss: 1.943
i: 526, target: 3.845, output: 3.207, loss: 0.406
i: 527, target: 2.132, output: 2.176, loss: 0.002
i: 528, target: 0.734, output: 1.763, loss: 1.057
i: 529, target: 6.989, output: 3.792, loss: 10.219
i: 530, target: 2.864, output: 3.716, loss: 0.727
i: 531, target: 7.717, output: 4.422, loss: 10.859
i: 532, target: 5.648, output: 4.304, loss: 1.807
i: 533, target: 5.394, output: 3.908, loss: 2.207

i: 534, target: 6.353, output: 3.408, loss: 8.673
i: 535, target: 0.327, output: 2.822, loss: 6.225
i: 536, target: 4.008, output: 5.835, loss: 3.338
i: 537, target: 1.300, output: 2.849, loss: 2.399
i: 538, target: 0.544, output: 2.453, loss: 3.644
i: 539, target: 0.632, output: 2.713, loss: 4.329
i: 540, target: 4.156, output: 5.437, loss: 1.641
i: 541, target: 6.436, output: 3.692, loss: 7.533
i: 542, target: 0.529, output: 2.709, loss: 4.754
i: 543, target: 4.715, output: 5.815, loss: 1.211
i: 544, target: 3.674, output: 5.049, loss: 1.890
i: 545, target: 1.947, output: 2.771, loss: 0.678
i: 546, target: 6.660, output: 3.562, loss: 9.596
i: 547, target: 5.891, output: 3.061, loss: 8.006
i: 548, target: 1.543, output: 2.089, loss: 0.298
i: 549, target: 5.717, output: 1.366, loss: 18.936
i: 550, target: 3.215, output: 2.415, loss: 0.640
i: 551, target: 4.295, output: 9.356, loss: 25.610
i: 552, target: 6.967, output: 6.655, loss: 0.097
i: 553, target: 4.513, output: 2.469, loss: 4.177
i: 554, target: 4.849, output: 2.097, loss: 7.572
i: 555, target: 6.179, output: 4.158, loss: 4.081
i: 556, target: 6.545, output: 4.158, loss: 5.696
i: 557, target: 0.773, output: 2.390, loss: 2.612

i: 558, target: 6.197, output: 4.324, loss: 3.507
i: 559, target: 3.587, output: 3.493, loss: 0.009
i: 560, target: 0.420, output: 2.234, loss: 3.290
i: 561, target: 5.203, output: 4.522, loss: 0.464
i: 562, target: 5.850, output: 2.878, loss: 8.831
i: 563, target: 5.795, output: 4.844, loss: 0.905
i: 564, target: 5.875, output: 4.175, loss: 2.891
i: 565, target: 5.216, output: 4.168, loss: 1.098
i: 566, target: 4.816, output: 5.321, loss: 0.255
i: 567, target: 1.659, output: 3.591, loss: 3.732
i: 568, target: 5.908, output: 4.313, loss: 2.546
i: 569, target: 4.649, output: 5.710, loss: 1.126
i: 570, target: 5.610, output: 4.564, loss: 1.094
i: 571, target: 4.435, output: 2.019, loss: 5.836
i: 572, target: 4.557, output: 4.158, loss: 0.160
i: 573, target: 9.211, output: 6.031, loss: 10.110
i: 574, target: 2.509, output: 4.749, loss: 5.020
i: 575, target: 1.877, output: 2.773, loss: 0.803
i: 576, target: 2.621, output: 6.022, loss: 11.567
i: 577, target: 4.118, output: 5.918, loss: 3.240
i: 578, target: 3.089, output: 5.799, loss: 7.346
i: 579, target: 1.277, output: 1.370, loss: 0.009
i: 580, target: 9.382, output: 7.642, loss: 3.029
i: 581, target: -0.146, output: 1.825, loss: 3.888

i: 582, target: 5.244, output: 7.325, loss: 4.333
i: 583, target: 2.083, output: 3.470, loss: 1.925
i: 584, target: 5.980, output: 3.615, loss: 5.593
i: 585, target: 4.036, output: 1.926, loss: 4.452
i: 586, target: 3.909, output: 2.432, loss: 2.183
i: 587, target: 0.777, output: 5.694, loss: 24.171
i: 588, target: 1.694, output: 3.588, loss: 3.589
i: 589, target: -0.482, output: 1.217, loss: 2.886
i: 590, target: 5.847, output: 2.266, loss: 12.818
i: 591, target: 7.395, output: 4.170, loss: 10.402
i: 592, target: 6.182, output: 5.609, loss: 0.328
i: 593, target: 3.573, output: 3.649, loss: 0.006
i: 594, target: 4.854, output: 4.843, loss: 0.000
i: 595, target: 3.937, output: 4.496, loss: 0.313
i: 596, target: 3.950, output: 4.021, loss: 0.005
i: 597, target: 6.507, output: 5.304, loss: 1.447
i: 598, target: 1.064, output: 2.586, loss: 2.317
i: 599, target: 4.859, output: 2.725, loss: 4.552
i: 600, target: 5.392, output: 7.202, loss: 3.274
i: 601, target: 6.445, output: 5.833, loss: 0.374
i: 602, target: 8.473, output: 3.032, loss: 29.603
i: 603, target: 2.847, output: 1.001, loss: 3.406
i: 604, target: 3.226, output: 2.322, loss: 0.818
i: 605, target: 4.420, output: 2.571, loss: 3.418

i: 606, target: 4.725, output: 6.425, loss: 2.889
i: 607, target: 2.694, output: 4.572, loss: 3.527
i: 608, target: 4.278, output: 5.746, loss: 2.157
i: 609, target: 8.207, output: 3.158, loss: 25.492
i: 610, target: 5.073, output: 1.995, loss: 9.473
i: 611, target: 7.799, output: 4.412, loss: 11.473
i: 612, target: 4.338, output: 3.752, loss: 0.343
i: 613, target: 2.906, output: 5.745, loss: 8.057
i: 614, target: 3.385, output: 4.005, loss: 0.385
i: 615, target: 0.685, output: 3.475, loss: 7.780
i: 616, target: 6.761, output: 5.639, loss: 1.258
i: 617, target: 3.216, output: 4.127, loss: 0.830
i: 618, target: 3.972, output: 6.010, loss: 4.156
i: 619, target: 7.917, output: 7.470, loss: 0.200
i: 620, target: 6.603, output: 3.771, loss: 8.020
i: 621, target: 1.925, output: 2.417, loss: 0.242
i: 622, target: 5.603, output: 7.169, loss: 2.452
i: 623, target: 2.748, output: 5.932, loss: 10.135
i: 624, target: 7.048, output: 2.576, loss: 19.997
i: 625, target: 6.427, output: 4.035, loss: 5.723
i: 626, target: 9.092, output: 5.503, loss: 12.881
i: 627, target: 1.304, output: 3.807, loss: 6.268
i: 628, target: 5.161, output: 5.336, loss: 0.030
i: 629, target: 6.507, output: 5.084, loss: 2.027

i: 630, target: 1.704, output: 2.736, loss: 1.063
i: 631, target: 5.985, output: 4.795, loss: 1.416
i: 632, target: 6.755, output: 7.423, loss: 0.446
i: 633, target: 4.980, output: 7.726, loss: 7.537
i: 634, target: -0.145, output: 1.761, loss: 3.634
i: 635, target: 4.372, output: 5.232, loss: 0.740
i: 636, target: 4.044, output: 1.067, loss: 8.862
i: 637, target: 5.221, output: 2.663, loss: 6.547
i: 638, target: 0.949, output: 3.603, loss: 7.044
i: 639, target: 5.439, output: 0.901, loss: 20.598
i: 640, target: 5.548, output: 5.544, loss: 0.000
i: 641, target: 5.471, output: 5.831, loss: 0.130
i: 642, target: 3.882, output: 5.618, loss: 3.013
i: 643, target: 5.236, output: 3.962, loss: 1.622
i: 644, target: 3.895, output: 3.169, loss: 0.528
i: 645, target: 6.916, output: 4.973, loss: 3.777
i: 646, target: 3.188, output: 3.433, loss: 0.060
i: 647, target: 3.807, output: 4.437, loss: 0.396
i: 648, target: 6.665, output: 6.251, loss: 0.172
i: 649, target: 9.732, output: 5.989, loss: 14.007
i: 650, target: 0.932, output: 2.266, loss: 1.780
i: 651, target: 4.210, output: 5.380, loss: 1.368
i: 652, target: 4.483, output: 1.914, loss: 6.604
i: 653, target: 2.596, output: 3.019, loss: 0.179

i: 654, target: 6.022, output: 6.231, loss: 0.044
i: 655, target: 1.964, output: 2.038, loss: 0.005
i: 656, target: 4.203, output: 4.301, loss: 0.010
i: 657, target: 7.459, output: 3.037, loss: 19.550
i: 658, target: 4.766, output: 4.615, loss: 0.023
i: 659, target: 7.164, output: 7.080, loss: 0.007
i: 660, target: 2.690, output: 3.416, loss: 0.527
i: 661, target: 4.562, output: 4.329, loss: 0.055
i: 662, target: 3.052, output: 2.259, loss: 0.629
i: 663, target: 7.731, output: 5.980, loss: 3.066
i: 664, target: 1.932, output: 5.024, loss: 9.558
i: 665, target: 3.720, output: 3.493, loss: 0.051
i: 666, target: 3.929, output: 6.606, loss: 7.164
i: 667, target: 2.036, output: 2.556, loss: 0.271
i: 668, target: 3.499, output: 0.774, loss: 7.425
i: 669, target: 7.228, output: 5.860, loss: 1.872
i: 670, target: 8.086, output: 5.310, loss: 7.707
i: 671, target: 4.113, output: 2.381, loss: 2.999
i: 672, target: 2.260, output: 2.968, loss: 0.501
i: 673, target: 6.290, output: 5.112, loss: 1.390
i: 674, target: 8.837, output: 8.193, loss: 0.414
i: 675, target: 2.997, output: 2.507, loss: 0.240
i: 676, target: 2.896, output: 4.304, loss: 1.982
i: 677, target: 3.651, output: 4.501, loss: 0.723

i: 678, target: 4.760, output: 5.916, loss: 1.337
i: 679, target: 5.159, output: 5.610, loss: 0.203
i: 680, target: 7.360, output: 5.482, loss: 3.529
i: 681, target: 8.846, output: 6.600, loss: 5.043
i: 682, target: 4.592, output: 4.620, loss: 0.001
i: 683, target: 3.709, output: 2.329, loss: 1.904
i: 684, target: 2.142, output: 3.784, loss: 2.696
i: 685, target: 1.371, output: 3.507, loss: 4.562
i: 686, target: 3.840, output: 2.191, loss: 2.719
i: 687, target: 5.140, output: 5.150, loss: 0.000
i: 688, target: 4.176, output: 3.967, loss: 0.043
i: 689, target: 7.112, output: 4.825, loss: 5.227
i: 690, target: 2.087, output: 3.383, loss: 1.680
i: 691, target: 6.556, output: 6.230, loss: 0.107
i: 692, target: 3.388, output: 1.797, loss: 2.531
i: 693, target: 7.408, output: 6.564, loss: 0.711
i: 694, target: 8.289, output: 7.834, loss: 0.207
i: 695, target: 7.718, output: 7.634, loss: 0.007
i: 696, target: 8.157, output: 7.644, loss: 0.264
i: 697, target: 4.274, output: 5.238, loss: 0.930
i: 698, target: 3.452, output: 1.961, loss: 2.225
i: 699, target: 3.227, output: 4.055, loss: 0.685
i: 700, target: 6.809, output: 6.648, loss: 0.026
i: 701, target: 4.003, output: 5.232, loss: 1.510

i: 702, target: 2.367, output: 2.585, loss: 0.048
i: 703, target: 6.379, output: 4.459, loss: 3.686
i: 704, target: 8.069, output: 5.964, loss: 4.432
i: 705, target: 3.823, output: 1.545, loss: 5.189
i: 706, target: 3.033, output: 5.199, loss: 4.692
i: 707, target: 4.307, output: 4.095, loss: 0.045
i: 708, target: 5.479, output: 5.606, loss: 0.016
i: 709, target: 2.435, output: 2.198, loss: 0.056
i: 710, target: 2.854, output: 7.106, loss: 18.081
i: 711, target: 5.255, output: 3.034, loss: 4.932
i: 712, target: 8.792, output: 5.771, loss: 9.123
i: 713, target: 3.307, output: 1.723, loss: 2.507
i: 714, target: 3.091, output: 2.929, loss: 0.026
i: 715, target: 8.670, output: 7.883, loss: 0.620
i: 716, target: 1.366, output: 3.629, loss: 5.120
i: 717, target: 5.275, output: 1.319, loss: 15.647
i: 718, target: 5.782, output: 4.110, loss: 2.796
i: 719, target: 3.552, output: 5.331, loss: 3.165
i: 720, target: 8.859, output: 5.624, loss: 10.461
i: 721, target: 2.378, output: 3.724, loss: 1.811
i: 722, target: 3.953, output: 2.599, loss: 1.832
i: 723, target: 6.898, output: 6.840, loss: 0.003
i: 724, target: 6.768, output: 9.712, loss: 8.668
i: 725, target: 0.046, output: 0.911, loss: 0.747

i: 726, target: 9.568, output: 6.579, loss: 8.930
i: 727, target: 1.347, output: 2.774, loss: 2.035
i: 728, target: 4.134, output: 4.152, loss: 0.000
i: 729, target: 4.195, output: 3.603, loss: 0.350
i: 730, target: 7.840, output: 5.513, loss: 5.416
i: 731, target: 0.060, output: 3.106, loss: 9.275
i: 732, target: 1.086, output: 1.775, loss: 0.476
i: 733, target: 2.816, output: 2.599, loss: 0.047
i: 734, target: 5.074, output: 2.871, loss: 4.853
i: 735, target: 4.821, output: 5.339, loss: 0.269
i: 736, target: 5.616, output: 4.675, loss: 0.886
i: 737, target: 5.555, output: 5.386, loss: 0.029
i: 738, target: 3.774, output: 3.444, loss: 0.109
i: 739, target: 3.540, output: 2.953, loss: 0.344
i: 740, target: 4.130, output: 4.338, loss: 0.043
i: 741, target: 0.069, output: 2.223, loss: 4.640
i: 742, target: 6.371, output: 3.004, loss: 11.337
i: 743, target: 4.252, output: 4.558, loss: 0.093
i: 744, target: 5.594, output: 2.870, loss: 7.422
i: 745, target: 5.613, output: 5.003, loss: 0.373
i: 746, target: 3.969, output: 3.441, loss: 0.279
i: 747, target: 2.894, output: 6.538, loss: 13.273
i: 748, target: 1.353, output: 4.106, loss: 7.578
i: 749, target: 5.580, output: 4.731, loss: 0.722

i: 750, target: 1.948, output: 3.289, loss: 1.799
i: 751, target: 1.826, output: 5.174, loss: 11.209
i: 752, target: 1.591, output: 3.183, loss: 2.535
i: 753, target: 7.543, output: 4.727, loss: 7.928
i: 754, target: 6.966, output: 6.020, loss: 0.896
i: 755, target: 4.195, output: 4.546, loss: 0.123
i: 756, target: 3.605, output: 2.700, loss: 0.818
i: 757, target: 3.149, output: 5.028, loss: 3.530
i: 758, target: 3.884, output: 4.374, loss: 0.240
i: 759, target: 1.226, output: 2.261, loss: 1.072
i: 760, target: 2.495, output: 2.218, loss: 0.077
i: 761, target: 7.241, output: 3.141, loss: 16.806
i: 762, target: 1.568, output: 0.719, loss: 0.721
i: 763, target: 3.965, output: 2.222, loss: 3.041
i: 764, target: 8.691, output: 6.194, loss: 6.235
i: 765, target: 2.563, output: 3.616, loss: 1.111
i: 766, target: 1.555, output: 3.125, loss: 2.467
i: 767, target: 7.755, output: 3.114, loss: 21.539
i: 768, target: 3.827, output: 5.206, loss: 1.903
i: 769, target: 7.680, output: 4.923, loss: 7.603
i: 770, target: 3.963, output: 4.929, loss: 0.933
i: 771, target: 1.460, output: 1.987, loss: 0.278
i: 772, target: 6.197, output: 5.164, loss: 1.069
i: 773, target: -0.423, output: 2.489, loss: 8.479

i: 774, target: 0.309, output: 4.171, loss: 14.915
i: 775, target: 2.825, output: 2.358, loss: 0.218
i: 776, target: 6.750, output: 2.967, loss: 14.306
i: 777, target: 5.621, output: 3.380, loss: 5.024
i: 778, target: 6.879, output: 3.504, loss: 11.391
i: 779, target: 7.353, output: 2.250, loss: 26.046
i: 780, target: 6.626, output: 6.639, loss: 0.000
i: 781, target: 4.503, output: 3.736, loss: 0.589
i: 782, target: 6.540, output: 2.716, loss: 14.624
i: 783, target: 4.375, output: 5.158, loss: 0.613
i: 784, target: 2.028, output: 3.673, loss: 2.706
i: 785, target: 7.738, output: 4.928, loss: 7.900
i: 786, target: 8.531, output: 4.380, loss: 17.225
i: 787, target: 3.638, output: 3.507, loss: 0.017
i: 788, target: 6.628, output: 5.650, loss: 0.957
i: 789, target: 5.562, output: 3.509, loss: 4.219
i: 790, target: 4.666, output: 4.957, loss: 0.085
i: 791, target: 1.270, output: 1.876, loss: 0.367
i: 792, target: 8.730, output: 4.081, loss: 21.614
i: 793, target: -0.280, output: 3.222, loss: 12.265
i: 794, target: 6.912, output: 5.699, loss: 1.472
i: 795, target: 1.001, output: 1.770, loss: 0.592
i: 796, target: 9.770, output: 5.435, loss: 18.786
i: 797, target: 6.954, output: 6.003, loss: 0.904

i: 798, target: 6.624, output: 5.076, loss: 2.398
i: 799, target: 5.062, output: 5.672, loss: 0.372
i: 800, target: 8.569, output: 3.755, loss: 23.178
i: 801, target: 4.501, output: 4.531, loss: 0.001
i: 802, target: 2.502, output: 4.730, loss: 4.967
i: 803, target: 4.179, output: 3.367, loss: 0.659
i: 804, target: 1.998, output: 2.943, loss: 0.895
i: 805, target: 2.163, output: 2.472, loss: 0.095
i: 806, target: 4.432, output: 2.707, loss: 2.977
i: 807, target: 4.048, output: 5.790, loss: 3.035
i: 808, target: 6.095, output: 5.355, loss: 0.547
i: 809, target: 5.279, output: 4.954, loss: 0.106
i: 810, target: 2.681, output: 2.769, loss: 0.008
i: 811, target: 3.418, output: 5.804, loss: 5.690
i: 812, target: 7.249, output: 6.188, loss: 1.126
i: 813, target: 7.808, output: 4.691, loss: 9.713
i: 814, target: 1.018, output: 2.036, loss: 1.036
i: 815, target: 5.191, output: 2.907, loss: 5.216
i: 816, target: 7.908, output: 6.513, loss: 1.944
i: 817, target: 5.515, output: 6.207, loss: 0.478
i: 818, target: 5.720, output: 6.483, loss: 0.582
i: 819, target: 3.364, output: 5.314, loss: 3.802
i: 820, target: 3.355, output: 2.671, loss: 0.467
i: 821, target: 7.205, output: 7.749, loss: 0.296

i: 822, target: 6.197, output: 4.727, loss: 2.160
i: 823, target: 0.447, output: 3.062, loss: 6.836
i: 824, target: 3.877, output: 4.120, loss: 0.059
i: 825, target: 7.091, output: 4.152, loss: 8.637
i: 826, target: 5.506, output: 2.193, loss: 10.978
i: 827, target: 5.011, output: 5.713, loss: 0.493
i: 828, target: 0.255, output: 4.278, loss: 16.185
i: 829, target: 7.617, output: 3.146, loss: 19.986
i: 830, target: 5.073, output: 2.149, loss: 8.546
i: 831, target: 9.171, output: 6.146, loss: 9.151
i: 832, target: 1.774, output: 2.630, loss: 0.732
i: 833, target: 2.516, output: 6.488, loss: 15.780
i: 834, target: 3.668, output: 2.947, loss: 0.520
i: 835, target: 8.199, output: 5.541, loss: 7.062
i: 836, target: 7.730, output: 6.272, loss: 2.126
i: 837, target: 6.714, output: 2.229, loss: 20.109
i: 838, target: 6.612, output: 4.147, loss: 6.076
i: 839, target: 6.505, output: 7.406, loss: 0.810
i: 840, target: 3.327, output: 5.145, loss: 3.304
i: 841, target: 5.206, output: 6.217, loss: 1.023
i: 842, target: 3.358, output: 5.995, loss: 6.953
i: 843, target: 6.881, output: 4.628, loss: 5.076
i: 844, target: 1.024, output: 3.065, loss: 4.167
i: 845, target: 6.875, output: 5.501, loss: 1.887

i: 846, target: 5.530, output: 4.756, loss: 0.600
i: 847, target: 2.516, output: 3.388, loss: 0.761
i: 848, target: 7.503, output: 5.426, loss: 4.314
i: 849, target: 3.512, output: 3.720, loss: 0.043
i: 850, target: 0.043, output: 2.861, loss: 7.941
i: 851, target: 8.155, output: 3.286, loss: 23.701
i: 852, target: 7.535, output: 3.751, loss: 14.317
i: 853, target: 3.266, output: 2.564, loss: 0.493
i: 854, target: 4.507, output: 3.596, loss: 0.830
i: 855, target: 9.673, output: 7.838, loss: 3.367
i: 856, target: 1.864, output: 2.074, loss: 0.044
i: 857, target: 2.156, output: 3.241, loss: 1.178
i: 858, target: 1.672, output: 2.454, loss: 0.611
i: 859, target: 7.139, output: 5.035, loss: 4.426
i: 860, target: 3.507, output: 5.348, loss: 3.389
i: 861, target: 7.030, output: 4.542, loss: 6.187
i: 862, target: 6.402, output: 3.193, loss: 10.301
i: 863, target: 5.148, output: 7.140, loss: 3.968
i: 864, target: 2.177, output: 1.937, loss: 0.057
i: 865, target: 5.008, output: 1.108, loss: 15.205
i: 866, target: 4.643, output: 6.238, loss: 2.545
i: 867, target: 8.134, output: 5.735, loss: 5.757
i: 868, target: 6.968, output: 3.950, loss: 9.108
i: 869, target: 2.337, output: 3.342, loss: 1.008

i: 870, target: 1.247, output: 3.197, loss: 3.803
i: 871, target: 6.965, output: 5.541, loss: 2.028
i: 872, target: 4.313, output: 5.484, loss: 1.370
i: 873, target: 1.692, output: 2.082, loss: 0.152
i: 874, target: 4.157, output: 4.757, loss: 0.360
i: 875, target: 3.771, output: 5.490, loss: 2.956
i: 876, target: 7.083, output: 5.222, loss: 3.465
i: 877, target: 4.813, output: 3.137, loss: 2.809
i: 878, target: 6.391, output: 5.179, loss: 1.467
i: 879, target: 1.583, output: 1.840, loss: 0.066
i: 880, target: 3.682, output: 1.765, loss: 3.675
i: 881, target: 2.408, output: 4.110, loss: 2.897
i: 882, target: 1.805, output: 2.278, loss: 0.224
i: 883, target: 2.536, output: 1.774, loss: 0.581
i: 884, target: 7.382, output: 4.998, loss: 5.685
i: 885, target: 3.783, output: 4.261, loss: 0.228
i: 886, target: -2.382, output: 1.282, loss: 13.424
i: 887, target: 0.117, output: 2.559, loss: 5.964
i: 888, target: 3.604, output: 1.922, loss: 2.831
i: 889, target: 1.594, output: 4.567, loss: 8.842
i: 890, target: 8.076, output: 5.660, loss: 5.834
i: 891, target: 0.851, output: 2.635, loss: 3.182
i: 892, target: 8.825, output: 2.875, loss: 35.396
i: 893, target: 8.821, output: 4.668, loss: 17.243

i: 894, target: 1.471, output: 4.025, loss: 6.521
i: 895, target: 8.089, output: 6.362, loss: 2.981
i: 896, target: 5.900, output: 4.362, loss: 2.367
i: 897, target: 4.102, output: 2.181, loss: 3.690
i: 898, target: 1.765, output: 4.079, loss: 5.356
i: 899, target: 2.959, output: 3.839, loss: 0.774
i: 900, target: 4.000, output: 5.986, loss: 3.944
i: 901, target: 1.747, output: 2.825, loss: 1.164
i: 902, target: 6.615, output: 5.859, loss: 0.572
i: 903, target: 1.971, output: 1.134, loss: 0.702
i: 904, target: 7.288, output: 4.880, loss: 5.798
i: 905, target: 4.404, output: 4.733, loss: 0.108
i: 906, target: 1.438, output: 3.592, loss: 4.639
i: 907, target: 6.560, output: 4.204, loss: 5.551
i: 908, target: 3.663, output: 2.478, loss: 1.405
i: 909, target: 4.473, output: 2.941, loss: 2.348
i: 910, target: 5.073, output: 4.924, loss: 0.022
i: 911, target: 6.379, output: 7.353, loss: 0.949
i: 912, target: 5.278, output: 5.002, loss: 0.076
i: 913, target: 5.231, output: 2.437, loss: 7.809
i: 914, target: 3.659, output: 4.209, loss: 0.302
i: 915, target: 2.034, output: 2.626, loss: 0.351
i: 916, target: 4.095, output: 5.679, loss: 2.509
i: 917, target: 3.773, output: 2.145, loss: 2.648

i: 918, target: 0.332, output: 1.563, loss: 1.516
i: 919, target: 2.929, output: 2.313, loss: 0.380
i: 920, target: 0.436, output: 2.526, loss: 4.365
i: 921, target: 5.930, output: 3.429, loss: 6.254
i: 922, target: 9.846, output: 10.216, loss: 0.137
i: 923, target: 9.875, output: 7.471, loss: 5.781
i: 924, target: 4.078, output: 2.592, loss: 2.209
i: 925, target: 4.632, output: 4.859, loss: 0.052
i: 926, target: -0.333, output: 2.581, loss: 8.496
i: 927, target: 4.119, output: 5.073, loss: 0.911
i: 928, target: 0.873, output: 1.889, loss: 1.033
i: 929, target: 5.281, output: 3.894, loss: 1.926
i: 930, target: 0.652, output: 4.351, loss: 13.685
i: 931, target: 4.687, output: 1.623, loss: 9.388
i: 932, target: 5.423, output: 3.131, loss: 5.252
i: 933, target: 6.579, output: 5.166, loss: 1.997
i: 934, target: 3.912, output: 2.044, loss: 3.490
i: 935, target: 3.648, output: 4.719, loss: 1.148
i: 936, target: 6.990, output: 4.232, loss: 7.608
i: 937, target: 7.030, output: 1.897, loss: 26.348
i: 938, target: -0.367, output: 3.247, loss: 13.066
i: 939, target: 6.379, output: 4.528, loss: 3.424
i: 940, target: 6.209, output: 4.987, loss: 1.493
i: 941, target: 6.368, output: 2.873, loss: 12.217

i: 942, target: 2.594, output: 3.198, loss: 0.365
i: 943, target: 2.279, output: 3.390, loss: 1.233
i: 944, target: 5.827, output: 7.017, loss: 1.417
i: 945, target: 3.746, output: 3.874, loss: 0.016
i: 946, target: 3.873, output: 2.078, loss: 3.223
i: 947, target: 3.830, output: 5.274, loss: 2.087
i: 948, target: 3.230, output: 1.951, loss: 1.637
i: 949, target: 5.538, output: 7.483, loss: 3.785
i: 950, target: 7.022, output: 5.946, loss: 1.158
i: 951, target: 1.527, output: 4.388, loss: 8.184
i: 952, target: 6.060, output: 1.679, loss: 19.192
i: 953, target: 8.201, output: 4.699, loss: 12.267
i: 954, target: 7.362, output: 1.976, loss: 29.005
i: 955, target: 4.845, output: 4.214, loss: 0.398
i: 956, target: 9.216, output: 4.751, loss: 19.942
i: 957, target: 1.203, output: 3.186, loss: 3.929
i: 958, target: -0.446, output: 1.721, loss: 4.698
i: 959, target: 6.787, output: 5.829, loss: 0.918
i: 960, target: 0.519, output: 2.472, loss: 3.813
i: 961, target: 2.206, output: 2.572, loss: 0.133
i: 962, target: 8.505, output: 2.537, loss: 35.618
i: 963, target: 5.421, output: 5.448, loss: 0.001
i: 964, target: 6.606, output: 3.344, loss: 10.640
i: 965, target: 9.921, output: 5.838, loss: 16.671

i: 966, target: 6.702, output: 2.804, loss: 15.191
i: 967, target: 0.188, output: 3.232, loss: 9.269
i: 968, target: 0.329, output: 1.531, loss: 1.447
i: 969, target: 4.145, output: 3.794, loss: 0.123
i: 970, target: 3.837, output: 4.896, loss: 1.122
i: 971, target: 0.524, output: 2.114, loss: 2.529
i: 972, target: 7.126, output: 6.288, loss: 0.702
i: 973, target: 4.336, output: 5.790, loss: 2.115
i: 974, target: 8.861, output: 7.427, loss: 2.058
i: 975, target: 4.216, output: 5.561, loss: 1.807
i: 976, target: 3.037, output: 1.254, loss: 3.179
i: 977, target: 2.843, output: 1.933, loss: 0.827
i: 978, target: 4.631, output: 2.047, loss: 6.677
i: 979, target: 8.913, output: 5.245, loss: 13.454
i: 980, target: 4.546, output: 2.725, loss: 3.318
i: 981, target: 8.099, output: 5.719, loss: 5.668
i: 982, target: 5.764, output: 3.640, loss: 4.509
i: 983, target: 4.392, output: 4.356, loss: 0.001
i: 984, target: 1.613, output: 2.239, loss: 0.392
i: 985, target: 1.874, output: 2.596, loss: 0.521
i: 986, target: 2.919, output: 3.333, loss: 0.171
i: 987, target: 4.560, output: 2.770, loss: 3.201
i: 988, target: 3.544, output: 3.059, loss: 0.236
i: 989, target: 2.777, output: 4.621, loss: 3.402

i: 990, target: 6.216, output: 5.895, loss: 0.103
i: 991, target: 3.242, output: 6.134, loss: 8.366
i: 992, target: 3.992, output: 5.429, loss: 2.065
i: 993, target: 3.709, output: 2.206, loss: 2.257
i: 994, target: 6.768, output: 5.580, loss: 1.412
i: 995, target: 1.880, output: 4.098, loss: 4.920
i: 996, target: 4.555, output: 2.143, loss: 5.818
i: 997, target: 6.016, output: 4.889, loss: 1.269
i: 998, target: 1.750, output: 2.293, loss: 0.295
i: 999, target: 5.967, output: 3.332, loss: 6.945
Average loss: 4.522