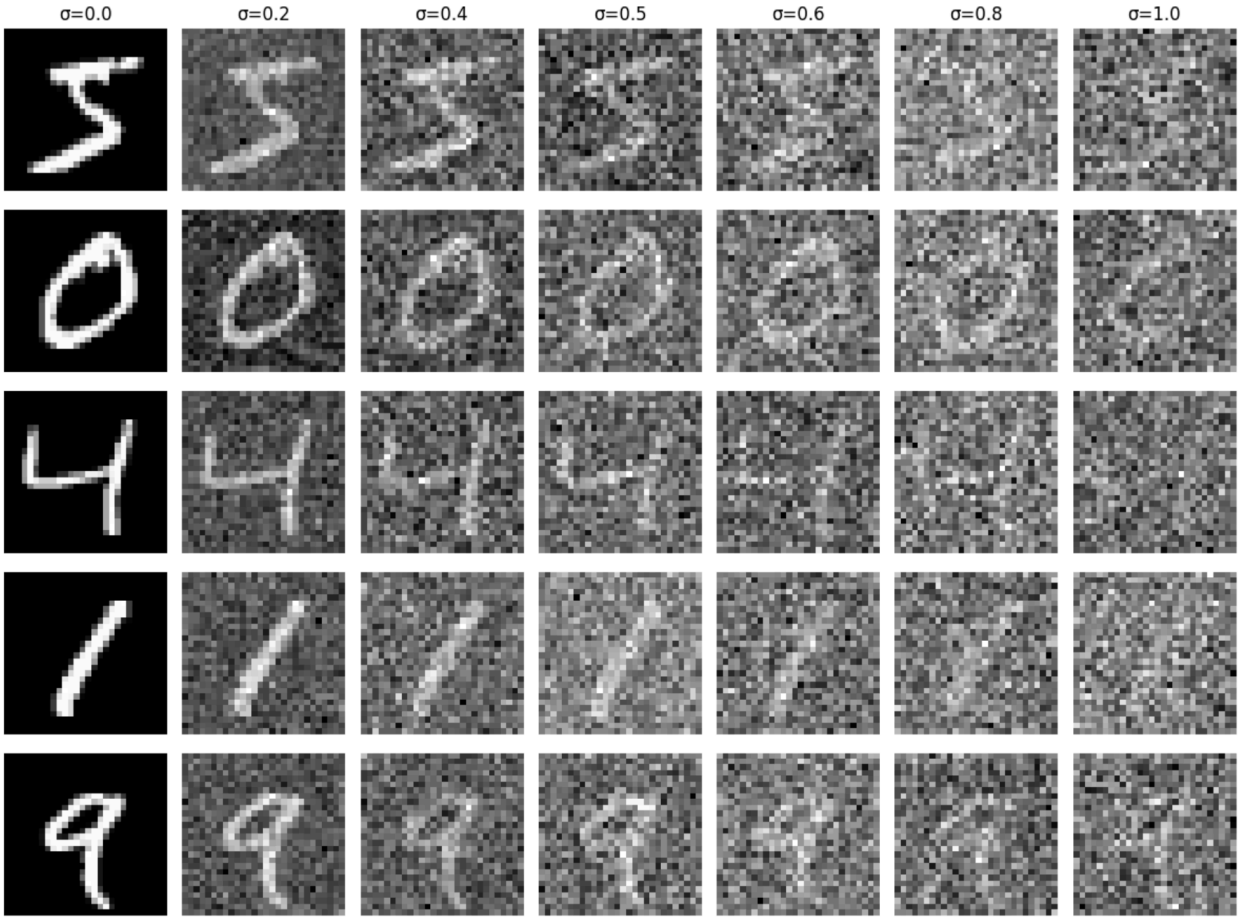
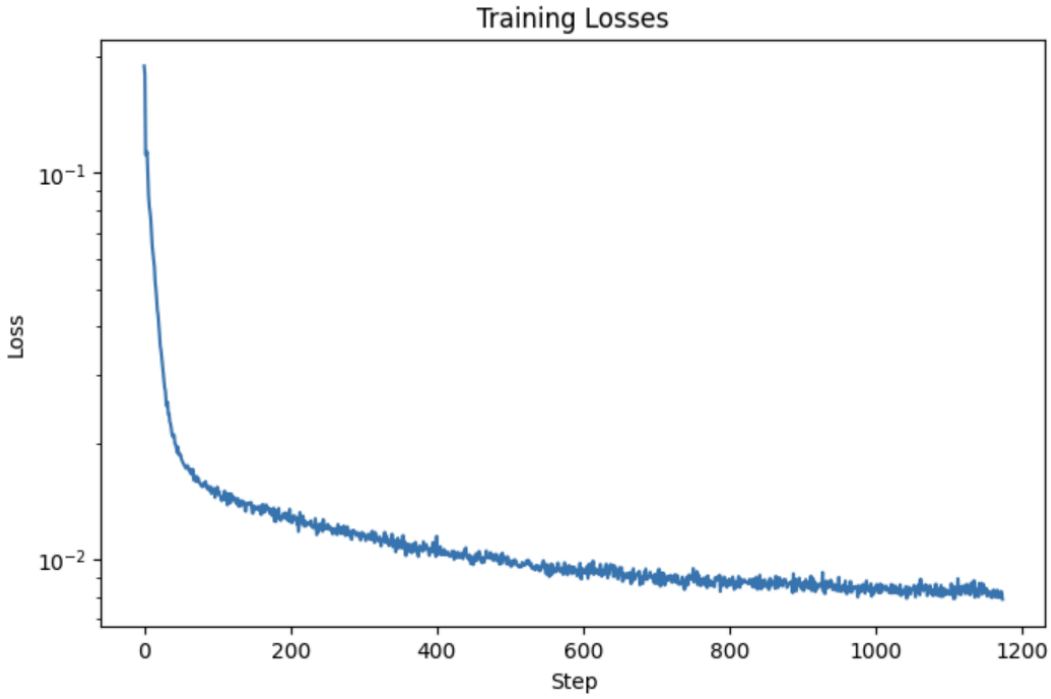
Report

Part 1: Single-Step Denoising UNet

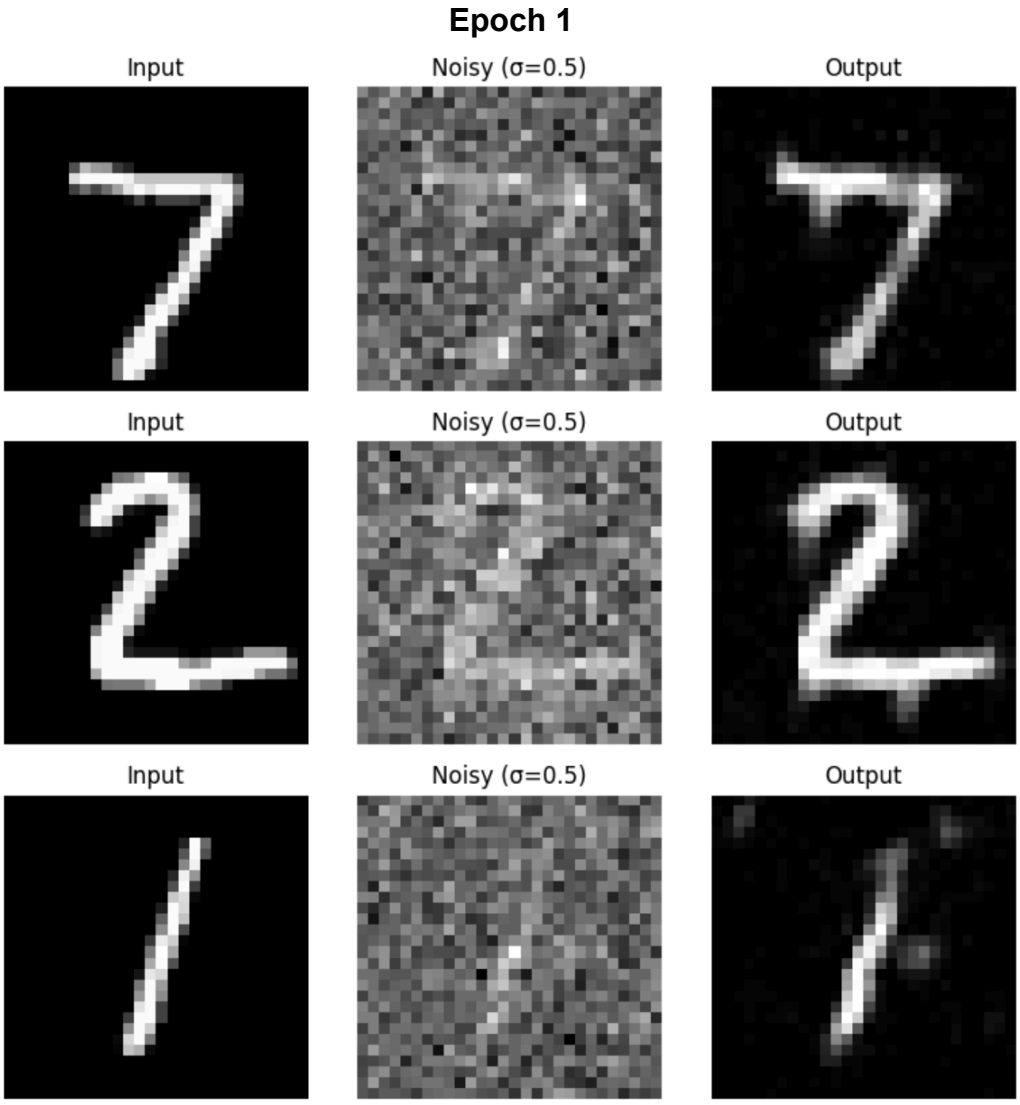
1. A visualization of the noising process using σ = [0.0, 0.2, 0.4, 0.5, 0.6, 0.8, 1.0].



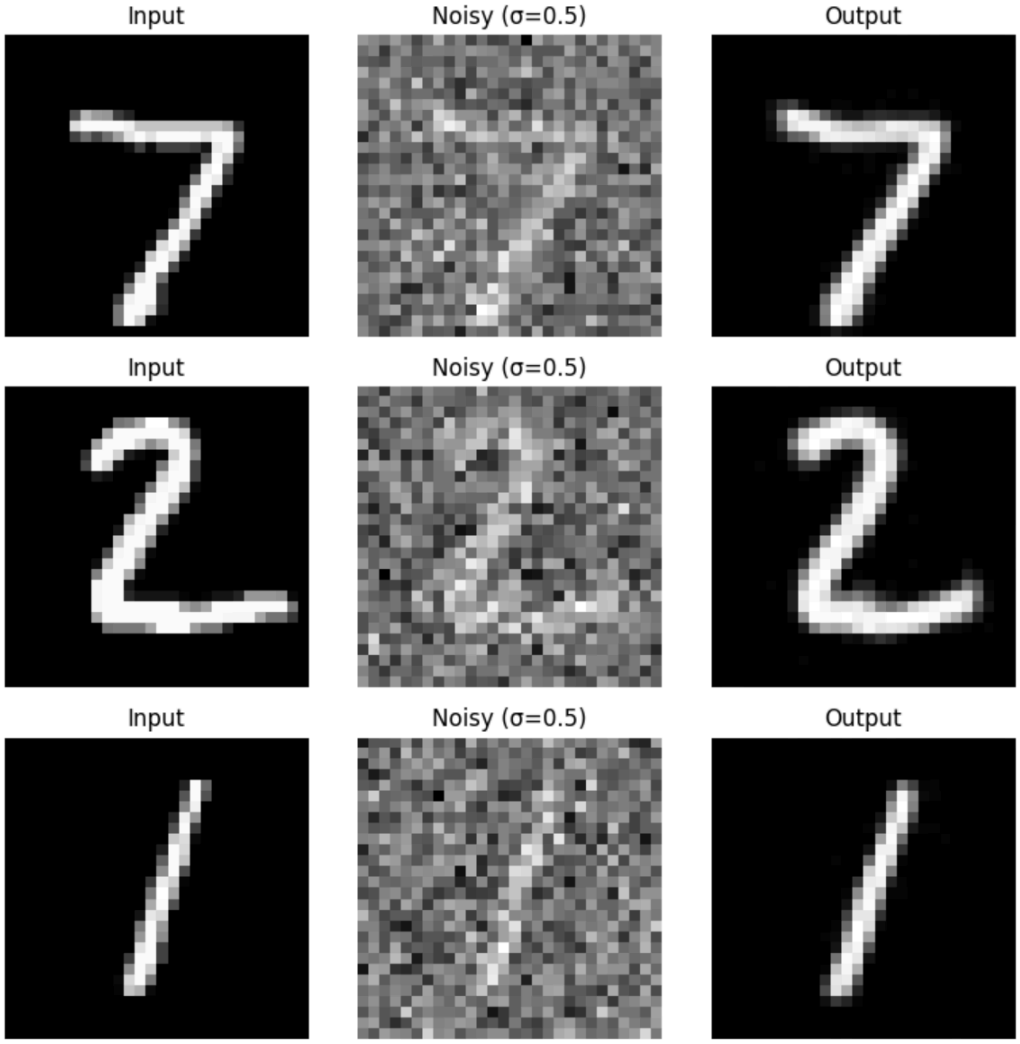
2. A training loss curve plot every few iterations during the whole training process.



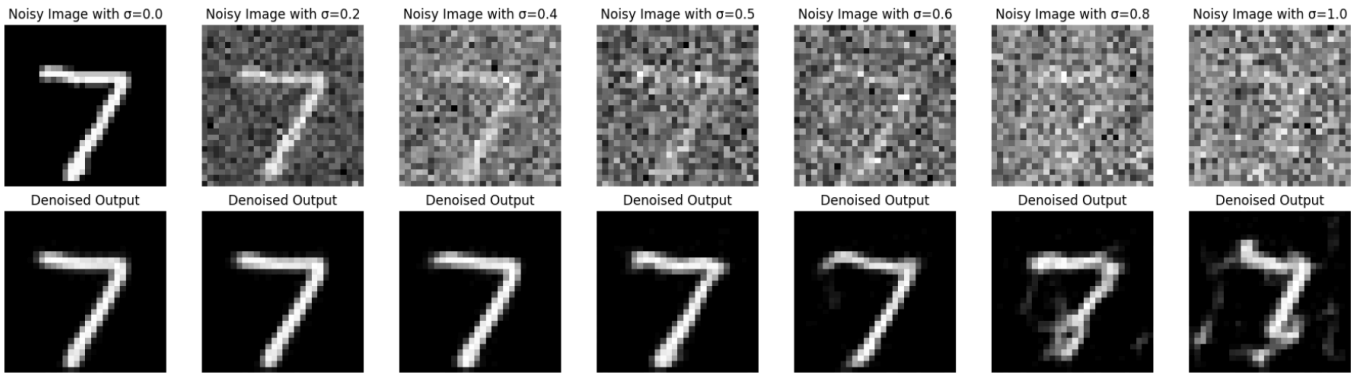
3. Sample results on the test set after the first and the 5th epoch.



Epoch 5

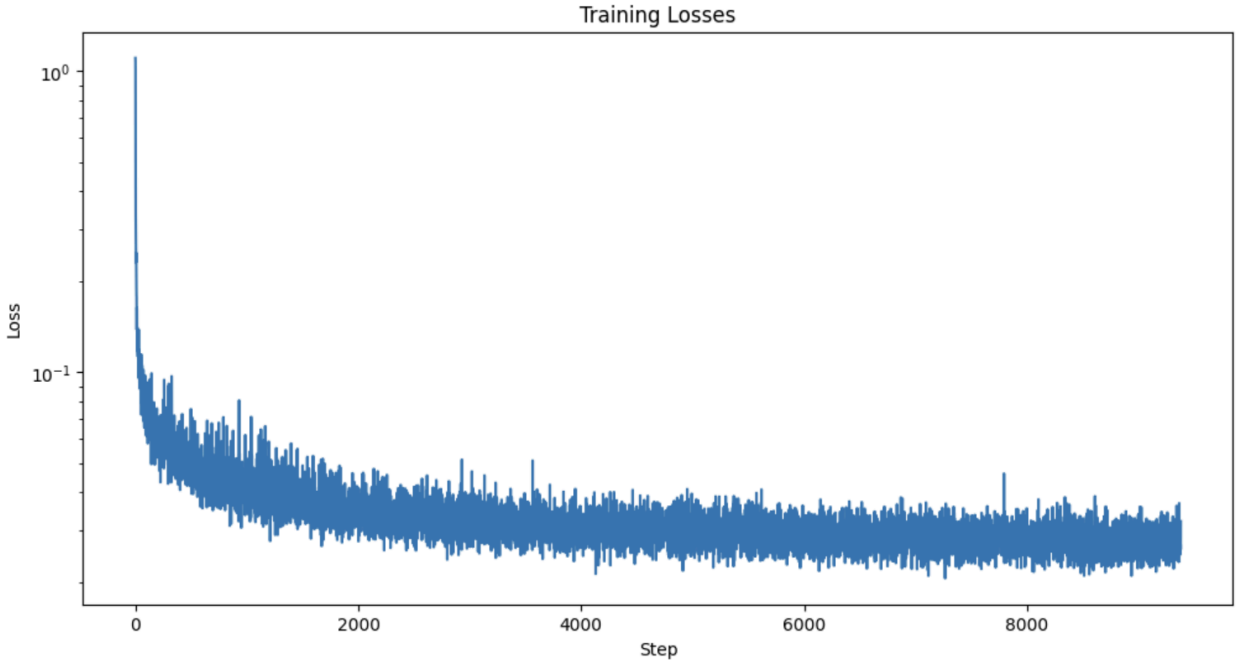


4. Sample results on the test set with out-of-distribution noise levels after the model is trained. Keep the same image and vary σ = [0.0, 0.2, 0.4, 0.5, 0.6, 0.8, 1.0].



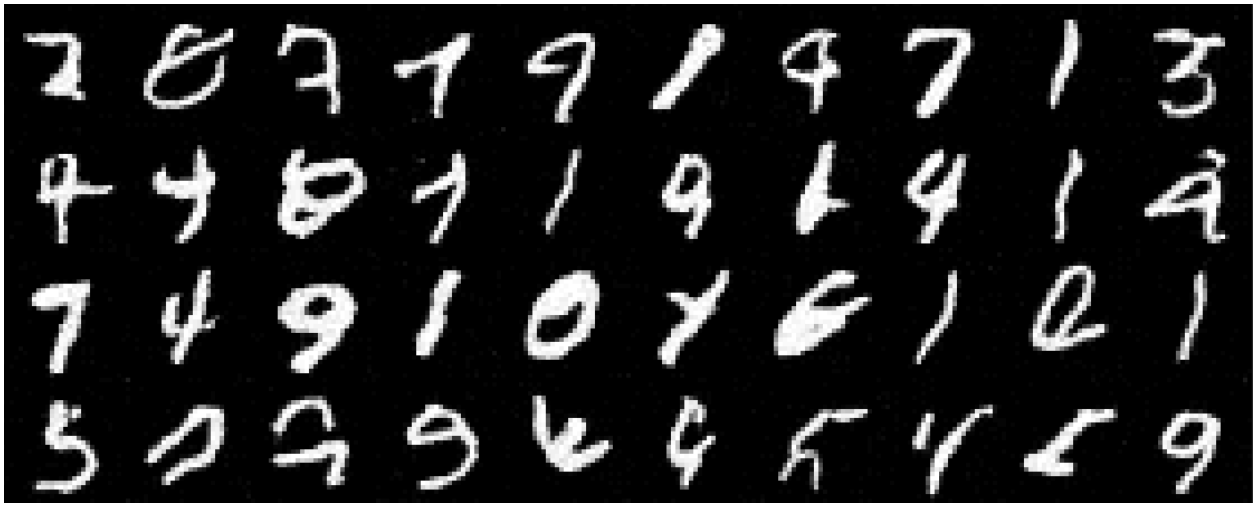
Part 2.1-2.3: Time-conditioned UNet

1. A training loss curve plot for the time-conditioned UNet over the whole training process.

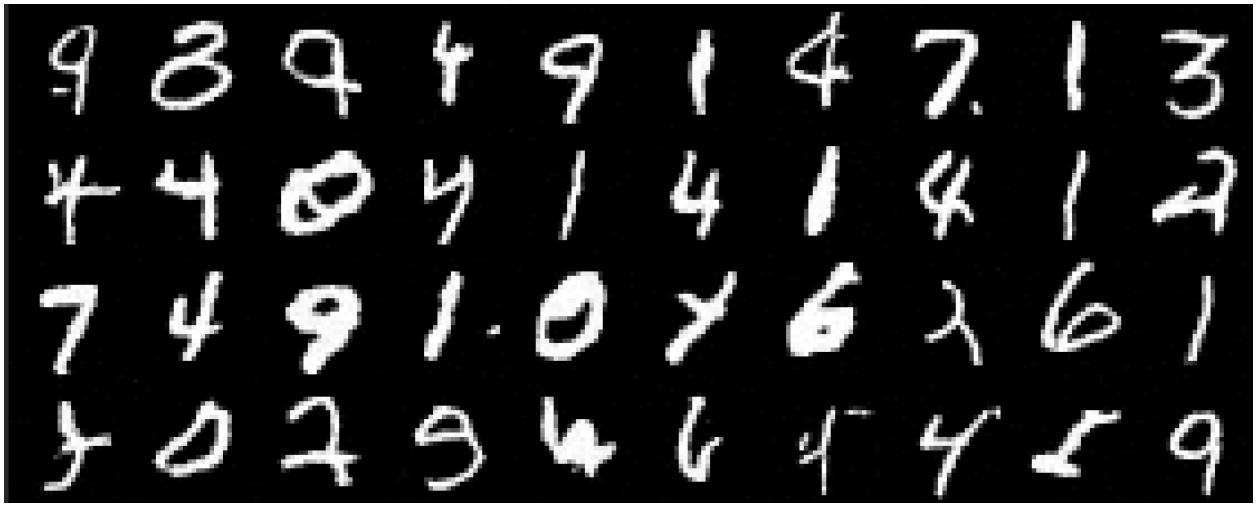


2. Sampling results for the class-conditioned UNet after the 5th and the 20th epoch.

Epoch 5

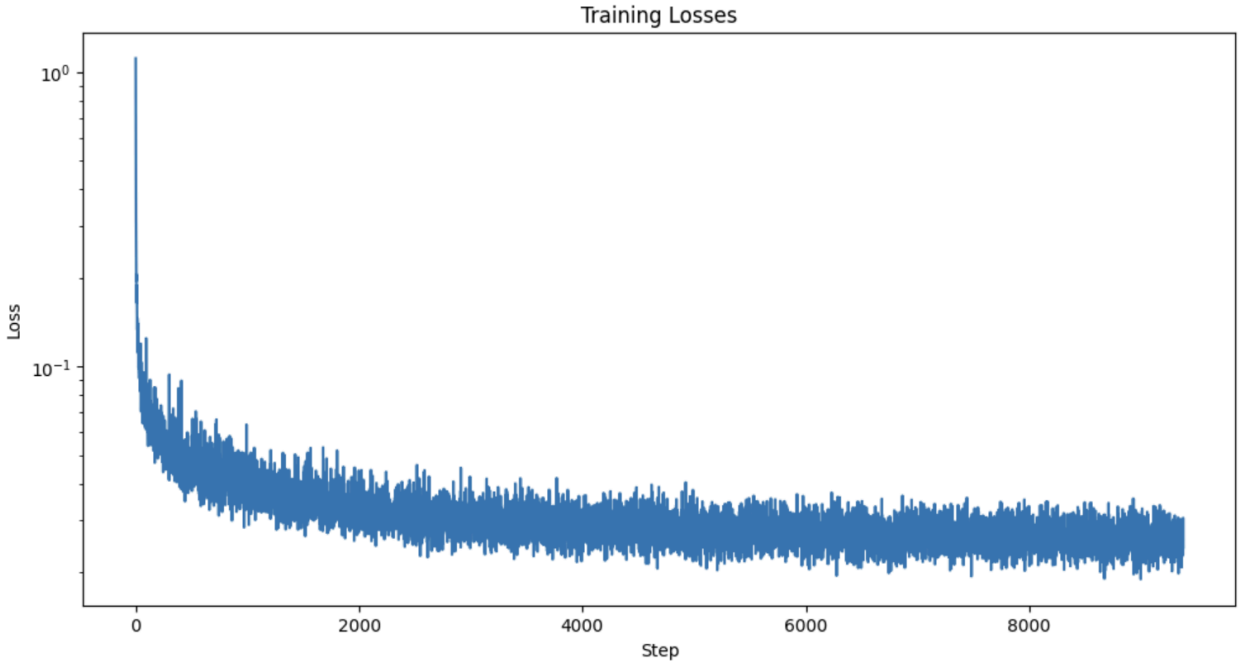


Epoch 20



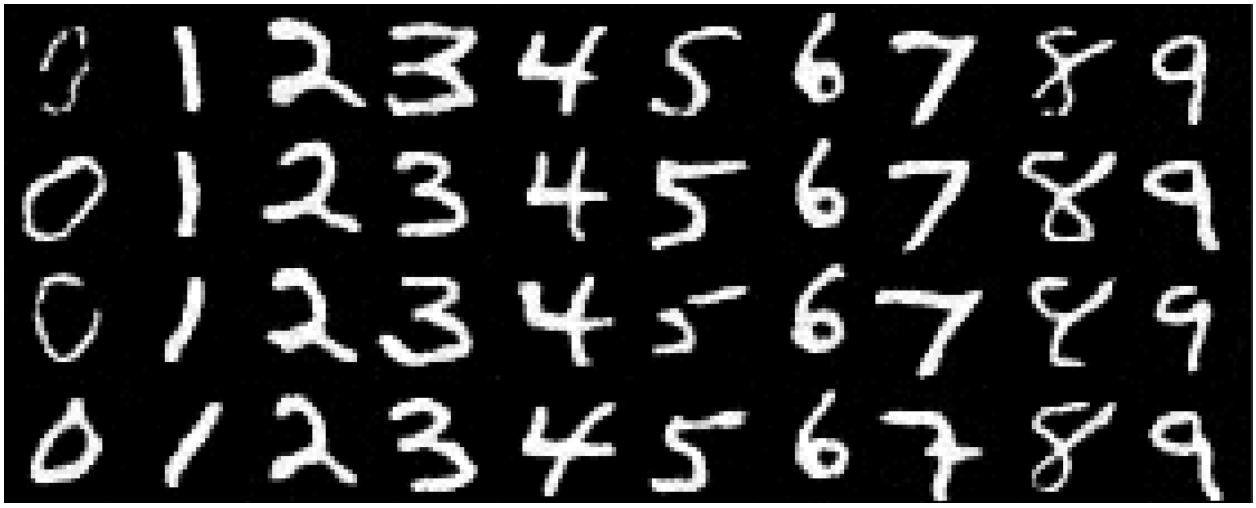
Part 2.4-2.5: Class-conditioned UNet

1. A training loss curve plot for the class-conditioned UNet over the whole training process.



2. Sampling results for the class-conditioned UNet after the 5th and the 20th epoch.

Epoch 5



Epoch 20