

Reverse Process Goal

Part 3/7: Reverse Process



Objective: Learn to reverse the forward diffusion process

Start Point

$$\mathbf{x}_T \sim N(0, I)$$

Pure Noise

$$p_{\theta}(\mathbf{x}_{t-1} | \mathbf{x}_t)$$

Iterative Denoising



End Point

$$\mathbf{x}_0 \sim p_{\text{data}}(\mathbf{x})$$

Data Sample



Markov Chain

Parameterized by neural network



Conditional Distribution

Model Gaussian transitions



Denoising Direction

Remove added noise



Generation Process

Iteratively denoise from noise to create new high-quality samples