Neural Network Training - Adaptive Batch Sampling
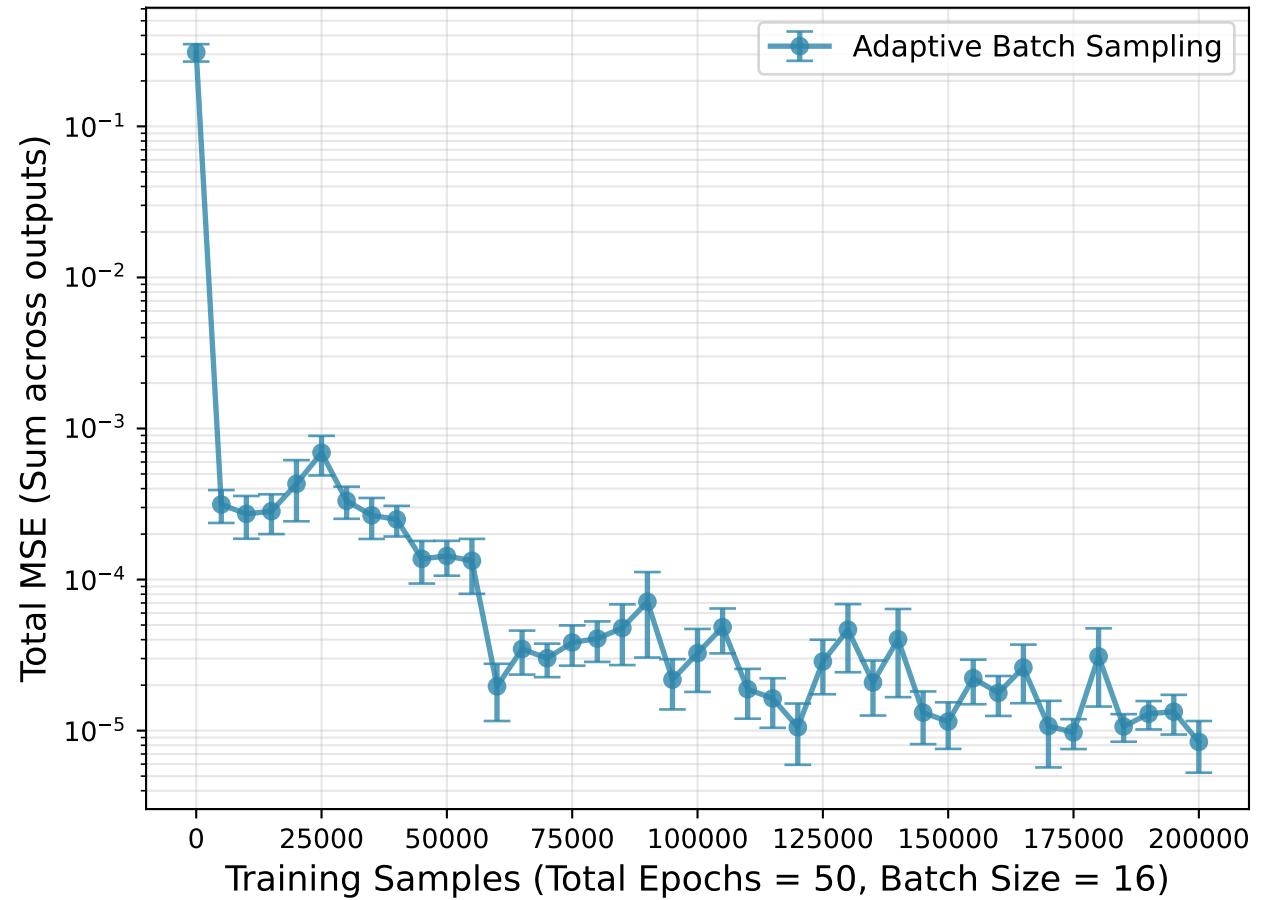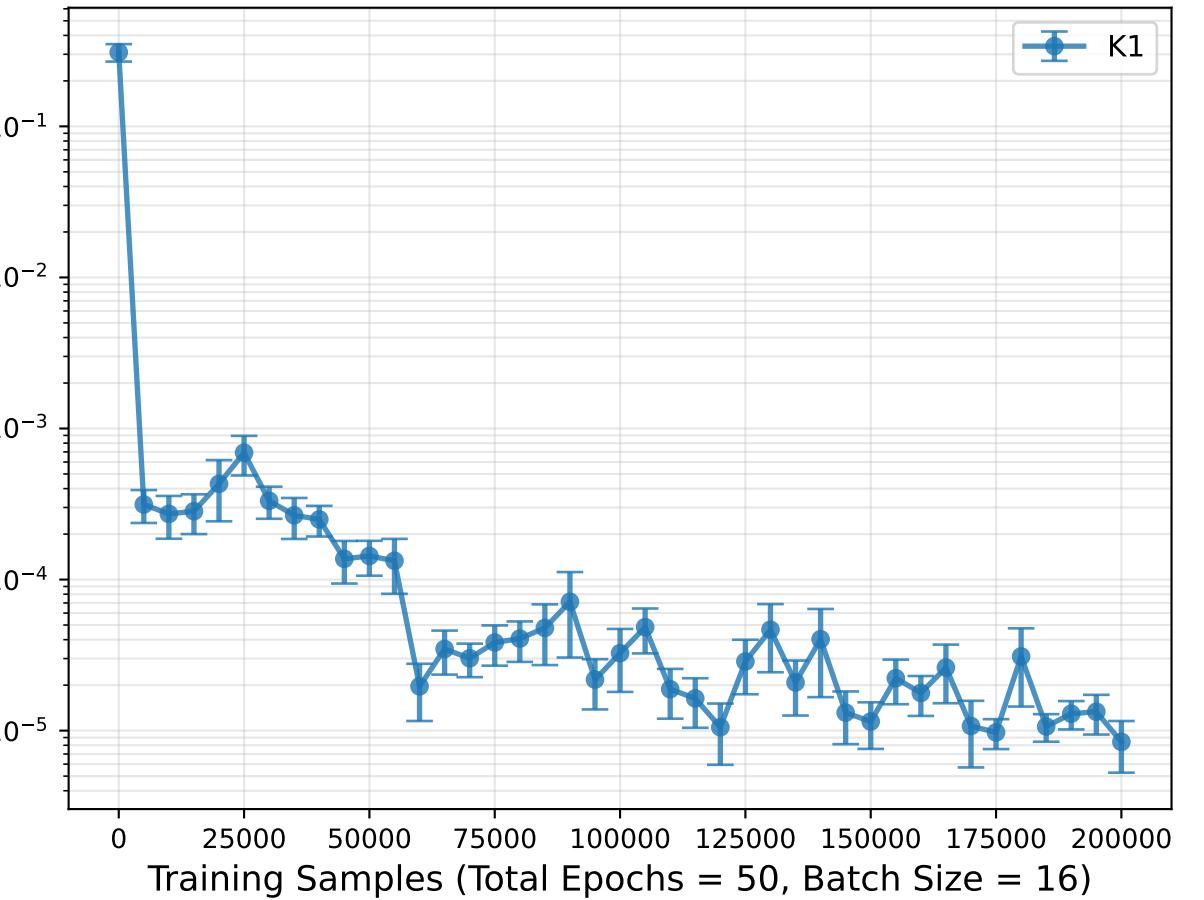**Uniform Sampling with Varying K Range (Training Data: 7 pool files × 100 samples/file)**

Learning Curve

Total MSE (Sum across outputs)

Training Samples (Total Epochs = 50, Batch Size = 16)

Adaptive Batch Sampling

MSE per K Value

MSE per Output

Training Samples (Total Epochs = 50, Batch Size = 16)

K1

Prediction Variance (Convergence Indicator)

Variance of Mean Predictions (Last 5 Iterations)

Training Samples (Total Epochs = 50, Batch Size = 16)

K1