

# Quantum Autoencoder (QAE) Training Report

## 1. Overview

This report summarizes the QAE model training process, key metric trends, and final performance.

## 2. Training and Validation

- Training set size: 56000
- Validation set size: 12000
- Test set size: 12000
- Samples used per epoch: 1000
- Total epochs: 240

## 3. Key Metrics

Metric	Min	Max	Final	Best Epoch
Avg Train Loss	0.1929	0.9789	0.1929	-
Val Fidelity	0.0464	0.8071	0.8071	238

## 4. Loss and Fidelity Curves

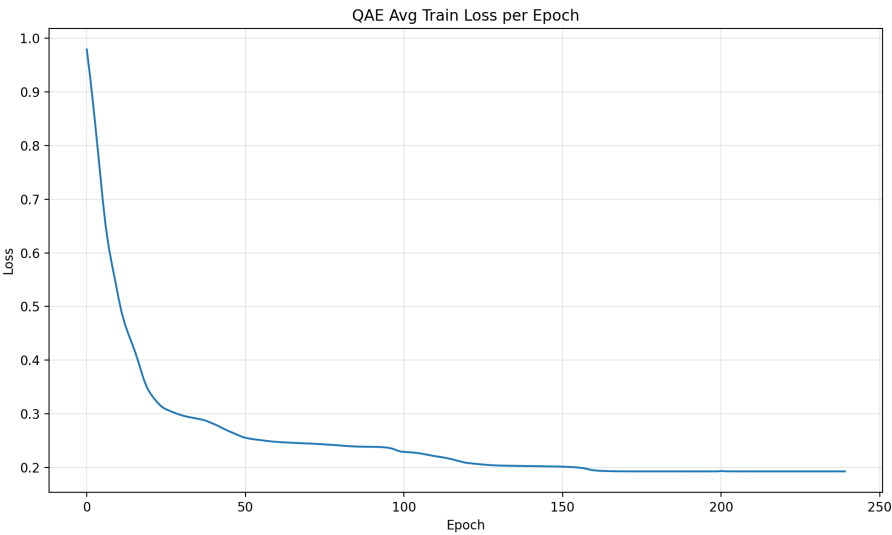


Figure 1: Train Loss

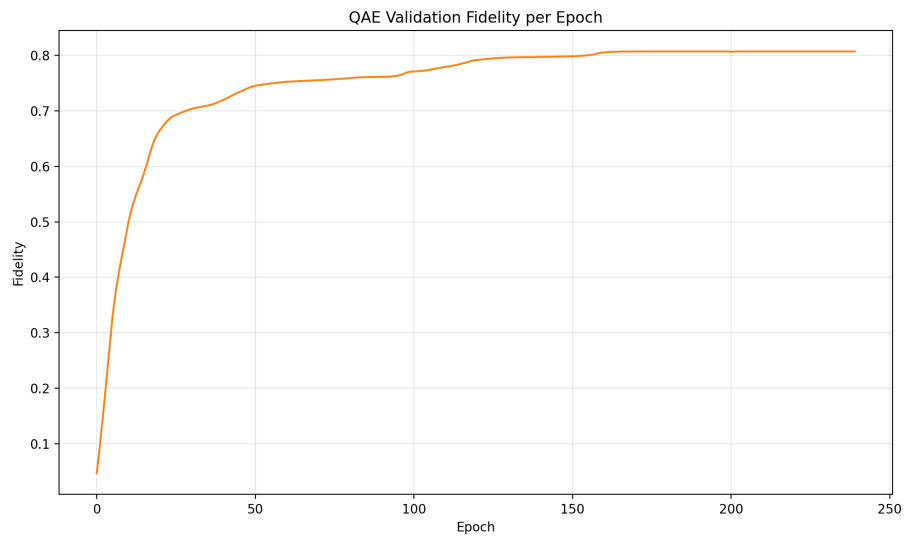


Figure 2: Validation Fidelity

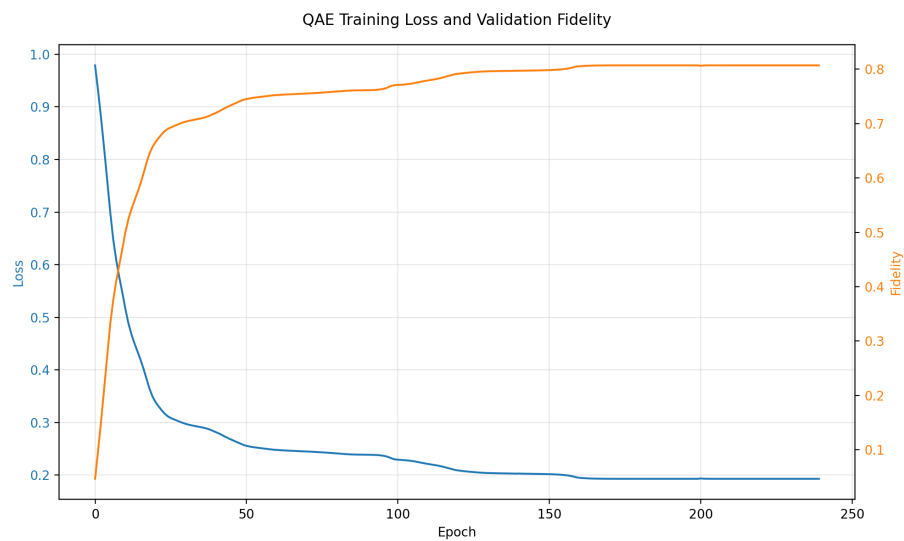


Figure 3: Loss & Fidelity

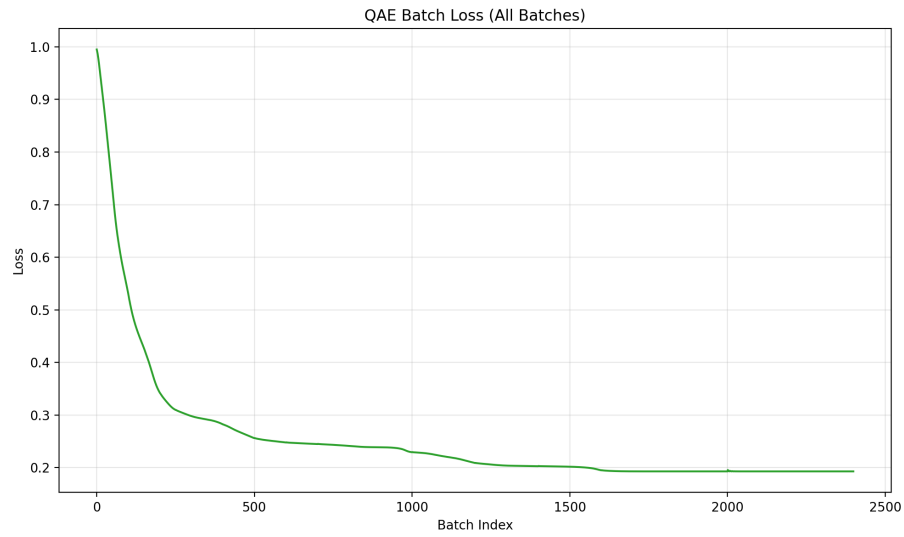


Figure 4: Batch Loss

## 5. Batch Loss Curve

## 6. Detailed Data

- Epoch metrics: qae\_epoch\_metrics.csv
- Batch losses: qae\_batch\_losses.csv
- Summary: qae\_summary.csv

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