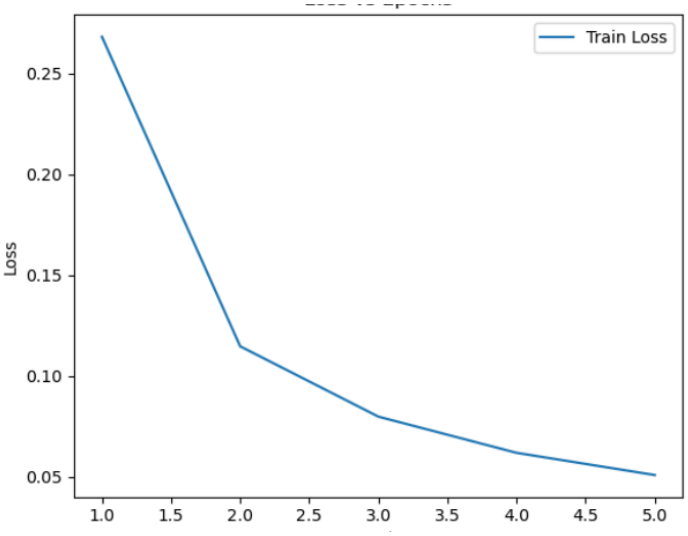
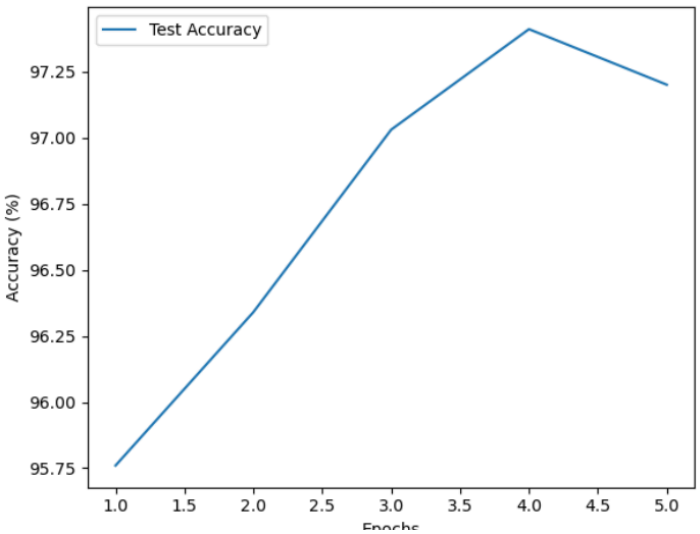
MNIST Training Report – Key Findings

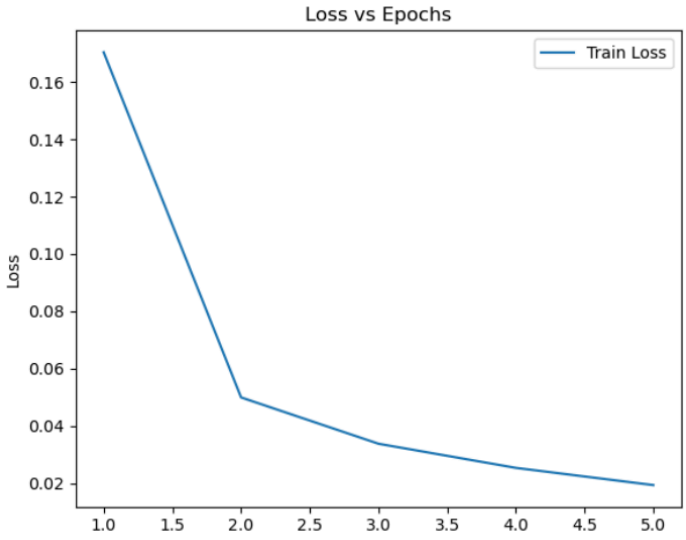
1. **Model Used**:
   Two models were used — a simple neural network (NN) and a convolutional neural network (CNN). The CNN performed better.
2. **Data Handling**:
   The MNIST dataset of handwritten digits was used. Data was normalized and split into training and testing sets.
3. **Training Process**:
   Both models were trained for a few epochs. The CNN learned faster and gave higher accuracy.
4. **Results**:
   - The CNN had better test accuracy than the NN.
   - A confusion matrix was used to see which digits were often misclassified.
   - Training and validation losses were plotted and showed good learning.
5. **Key Observations**:
   - CNN worked better for image data.
   - The model did not overfit, and accuracy improved with each epoch.



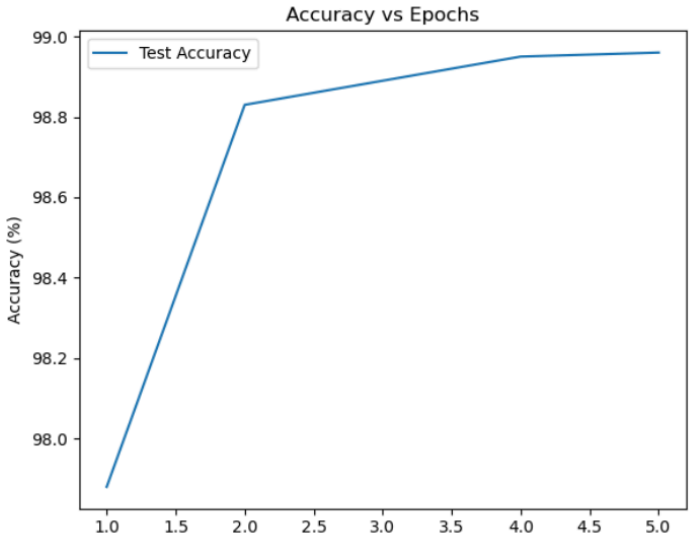
Simple feedforward NN-Loss vs Epochs



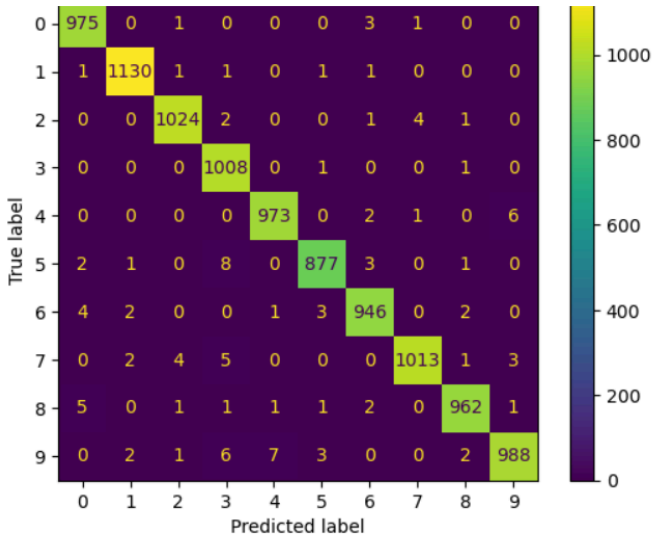
Simple feedforward NN-Accuracy vs Epochs



CNN model-Loss vs Epochs



CNN model-Accuracy vs Epochs



Confusion Matrix for CNN

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