

Title: CNN-Based Image Classification

Tools Used: Python, TensorFlow, Google Colab

Dataset: MNIST(handwritten digits)

Output:

Test Accuracy: 0.98

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Epoch 1/5
1875/1875 ————— 59s 30ms/step - accuracy: 0.9026 - loss: 0.3198 - val_accuracy: 0.9828 - val_loss: 0.0558
Epoch 2/5
1875/1875 ————— 54s 29ms/step - accuracy: 0.9840 - loss: 0.0515 - val_accuracy: 0.9876 - val_loss: 0.0411
Epoch 3/5
1875/1875 ————— 83s 29ms/step - accuracy: 0.9902 - loss: 0.0325 - val_accuracy: 0.9915 - val_loss: 0.0294
Epoch 4/5
1875/1875 ————— 55s 29ms/step - accuracy: 0.9928 - loss: 0.0234 - val_accuracy: 0.9881 - val_loss: 0.0361
Epoch 5/5
1875/1875 ————— 54s 29ms/step - accuracy: 0.9947 - loss: 0.0165 - val_accuracy: 0.9889 - val_loss: 0.0358
313/313 ————— 3s 8ms/step - accuracy: 0.9849 - loss: 0.0493
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Test Accuracy: 0.9889000058174133

Conclusion:

Model trained and classified digits successfully.