MNIST Digit Classifier — CNN Project Summary

Business Goal: Automate digit recognition (e.g., processing scanned forms).

Dataset: 70,000 handwritten digits (28×28 grayscale).

Model: Convolutional Neural Network (Conv2D + Pooling + Dense).

Performance: 99.1% test accuracy.

Key Insight: CNNs outperform dense models because they capture spatial structure.

Error Cases: Most mistakes are messy or ambiguous digits (e.g., 4 vs 9).

Value: Reliable digit recognition pipeline → transferable to invoices, OCR, support automation.