POC (PROOF OF CONCEPT)

Detecting and Digitizing Handwritten Dates in Real Time:

My project focused on real-time recognition and digitization of handwritten dates, used in hospitals during check-ins, consent forms, and prescription retrieval. In this digitalized world handwritten input is still preferred for legal validity, ease of access, and elderly comfort writing instead of typing. Using digital pads, dates are captured as images, split into 28×28-pixel digits, and processed with machine learning. I used the MNIST dataset (70,000 samples), training Naive Bayes and Full Gaussian Bayes models, achieving 77.91% and 95.44% accuracy. The project was built in Google Colab using Python, NumPy, Pandas, Matplotlib, and SciPy.

Key Points

- Focused on recognizing and digitizing handwritten dates in real time.
- Use case inspired by hospital processes like check-ins and consent forms.
- Handwritten inputs are taken from digital pads and converted to digital text using ML.
- Each digit is a 28×28-pixel grayscale image (784 total features).
- Used the MNIST dataset with 70,000 samples: 60,000 for training and 10,000 for testing.
- Implemented Naive Bayes and Full Gaussian Bayes models with accuracies of 77.91% and 95.44%.
- Built and tested the project in Google Collab using Python, NumPy, Pandas, Matplotlib, and SciPy.