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PROJECT TITLE

Digital Handwriting Recognition Using Generative AI

AGENDA

- Problem Statement
- Project Overview
- Target Users
- Solution and Value Proposition
- The Wow Factor: What Makes Our Solution Unique
- Modeling Results
- Summary

PROBLEM STATEMENT

A recognition model to help with Difficulty in accurately recognizing handwritten text by computers,Challenges in deciphering various writing styles and variations ,Impact on applications like document processing, form filling, and note-taking

PROJECT OVERVIEW

- Develop a digital handwriting recognition system using generative AI
- Leverage generative models to create synthetic training data with diverse handwriting styles
- Train a deep learning model to recognize handwritten text with high accuracy

WHO ARE THE END USERS?

- Developers of document processing applications
- Users of note-taking and form-filling apps
- Educators and students working with handwritten assignments
- Anyone who needs to convert handwritten text into digital format

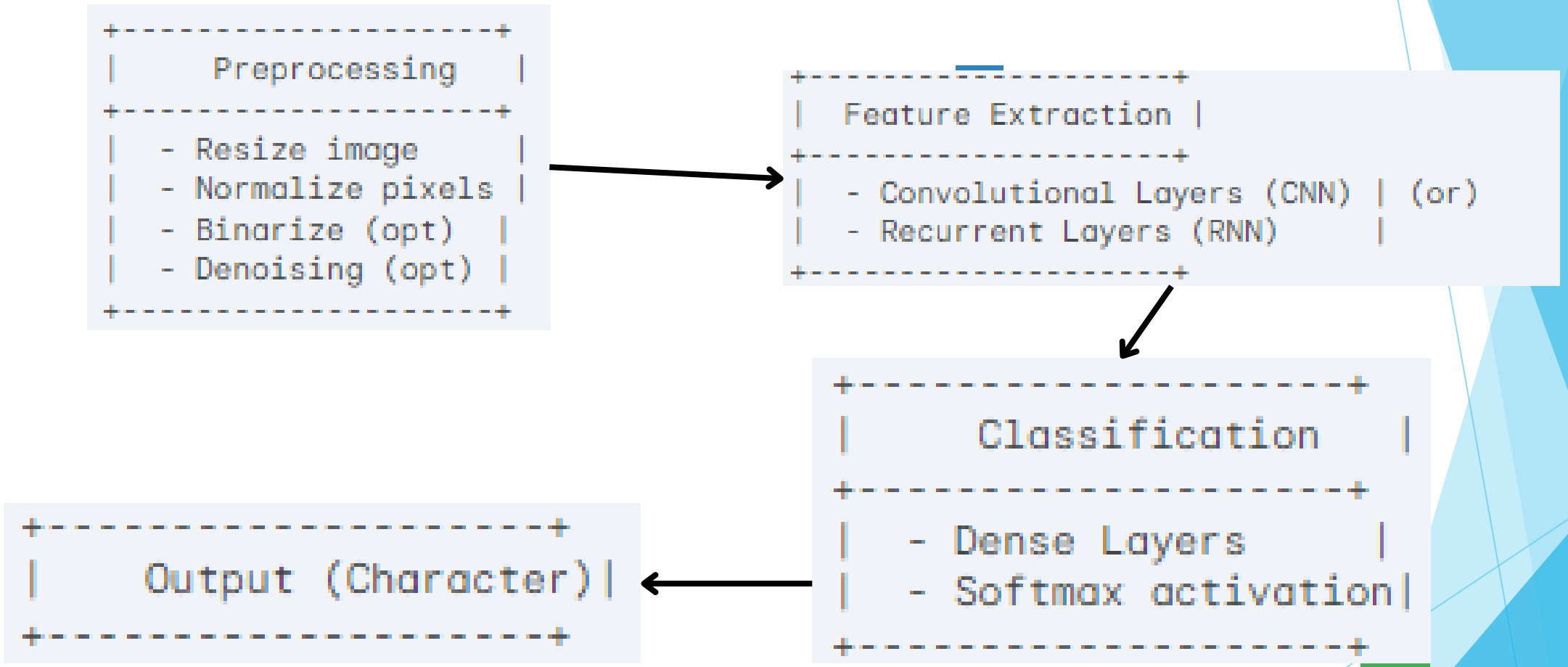
YOUR SOLUTION AND ITS VALUE PROPOSITION

- Highly accurate recognition of diverse handwriting styles
- Improved efficiency for document processing and data entry tasks
- Enhanced accessibility for users with handwriting difficulties
- Potential for real-time handwriting recognition applications

THE WOW IN YOUR SOLUTION

- Leverages cutting-edge generative AI for synthetic data creation
- Achieves superior accuracy compared to traditional methods
- Offers the potential for real-time applications
- Highly scalable and adaptable to diverse use cases

MODELLING


Preprocessing
- Resize image
- Normalize pixels
- Binarize (opt)
- Denoising (opt)
Feature Extraction
- Convolutional Layers (CNN)
(or)
- Recurrent Layers (RNN)
Classification
- Dense Layers
- Softmax activation
Output (Character)

RESULTS

The project demonstrates the effectiveness of GANS in generating realistic handwritten digit images and provides insights into the challenges and opportunities in training and deploying generative models. Moving forward, further research and experimentation will continue to push the boundaries of generative modeling and its practical applications.

Demo Link