

Review on MODI Script Character Recognition Using Deep Learning Techniques

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Abstract: *The MODI script, a historic Indian script with limited use in administrative activities from the 17th to 19th centuries, is highly challenging for character recognition systems. The MODI script characters are dissimilar, have intricate structures, and exist with different handwriting patterns, hence rendering automatic identification cumbersome. Despite the limitations, some machine learning, especially deep learning, methods have been utilized to recognize MODI scripts accurately in recent years. This review investigates the uses of convolutional neural networks (CNNs), transfer learning models such as VGG16 and ResNet, and mixed architectures fusing CNN with Support Vector Machines (SVM). We discuss these methods' methodologies, advantages, and disadvantages, explain challenges concerning dataset insufficiency and handwriting diversity, and propose possible future studies to enhance recognition systems. This article emphasizes the importance of automated MODI script recognition in preserving and making historical documents accessible..*

Keywords: MODI Script Recognition, Deep Learning, Convolutional Neural Networks (CNN), Transfer Learning, Optical Character Recognition (OCR), Historical Document Preservation, Machine Learning, Handwritten Script Recognition, Hybrid Models, Cultural Heritage Accessibility

