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Handwritten Optical Character Recognition to Digital Text Conversion

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Abstract: *Handwritten Optical Character Recognition (OCR) is a crucial technology for converting handwritten text into digital format. This process involves detecting and interpreting handwritten characters from images or scanned documents. In this project, we focus on OCRfor three languages: Kannada, Telugu, and Hindi. The system utilizes machine learning algorithms, specifically trained neural networks, to recognize and transcribe handwritten characters accurately. The OCR system preprocesses the input images, applies character segmentation, and then classifies each segment into the corresponding character class. Post- processing techniques may be applied to improve accuracy and handle noise. The converted digital text can then be further processed, analyzed, or stored as needed. This technology has various applications in digitizing historical documents, automating data entry tasks, and enabling accessibility for visually impaired individuals*

Keywords: Handwritten OCR, Optical Character Recognition, Kannada, Telugu, Hindi, Machine Learning, Neural Networks, Character Segmentation, Digital Text Conversion