Efficient OCR for Handwritten Marathi Text with SVM-ACS Algorithm

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Abstract: *Optical Character Recognition (OCR) technology has revolutionized the way we process and analyze text data. OCR algorithms have been widely used to recognize printed text, but recognizing handwritten text poses a greater challenge due to its variability and complexity. In this essay, we will explore the challenges of OCR for handwritten text, with a focus on the Marathi language. We will then introduce the SVM-ACS algorithm, a powerful tool for efficient OCR of handwritten Marathi text. Finally, we will discuss future directions for improving OCR technology for handwritten Marathi text and its potential applications in various fields.*

OCR technology is a process of converting scanned images of text into machine-readable text. OCR algorithms have been widely used for printed text recognition, but recognizing handwritten text is more challenging due to its variability and complexity. Handwriting varies widely between individuals, and it can be influenced by various factors such as the writing medium, writing style, and the writer's experience. The challenges of OCR for handwritten text include segmentation, feature extraction, and recognition. These challenges are compounded in languages like Marathi, which have complex scripts and diacritical marks. Despite these challenges, OCR technology for handwritten text is crucial for preserving and analyzing historical documents, improving education, and facilitating research.

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Keywords: Optical Character Recognition (OCR) technology, Handwritten text recognition, SVM-ACS algorithm, Education improvement, Text data processing, Variability and complexity in handwritten text

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DOI: 10.48175/568

ISSN
2581-9429
IJARSCT

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