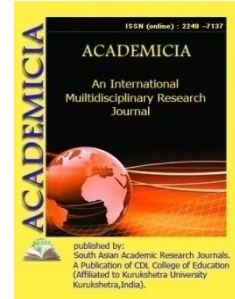




ACADEMICIA
**An International
Multidisciplinary
Research Journal**
(Double Blind Refereed & Peer Reviewed Journal)



DOI: 10.5958/2249-7137.2021.02213.8

HANDWRITTEN DIGIT RECOGNITION BASED ON MACHINE LEARNING ALGORITHM

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ABSTRACT

OCR is a broad field of study that focuses on pattern recognition. Advanced structures that can identify unique typefaces and have high reliability and accuracy are becoming more popular, and they support a wide variety of report codecs and image formats. Handwriting movement analysis may be utilized as a source of information for handwriting recognition. This will improve the end-to-end process's correctness while also increasing its dependability. One of the most practical problems in pattern recognition is text recognition. Digit recognition is used in a variety of applications, including postal mail sorting, bank processing, and data input. The problem stems from the possibility of creating an algorithm that can identify handwritten numbers and send the data to a scanner, tablet, or other digital device. The article discusses different machine learning-based methods to off-line handwritten digits. The most essential aim of the article is to ensure that effective and reliable methods for recognizing handwritten numbers are developed. For digit recognition, many machine learning methods were employed, including Multilayer Perceptron, Support Vector Machine (SVM), Bayes Net, and Random Forest.

KEYWORDS: *Digital processing, Digit Recognition, Machine Learning, SVM.*

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