

# Review of Machine Learning Algorithms in Modern Image Processing Systems

Sukes Maiti<sup>1</sup> and Dr. Rajiv Dahiya<sup>2</sup>

<sup>1</sup>Research Scholar, Department of Electronics & Communication Engineering

<sup>2</sup>Research Guide, Department of Electronics & Communication Engineering

NIILM University, Kaithal, Haryana, India

**Abstract:** *The paper describes the anomaly and shows the mathematical approaches and algorithm needed to recognize it. Handwritten mathematical symbols and equations have garnered attention and consolidation in pattern recognition. With new and better handwritten character identification algorithms, more heterogeneous handwritten digit data sets develop. The issue is handwritten data sets' behavior. The disadvantage that handwritten digit data sets of diverse features can't calculate is addressed by a more complex handwritten digit representation model based on multiple instance learning (MIL) that contains digit data from different feature spaces in a bag. Different machine learning methods for offline pattern identification are presented in this research. Some machine learning methods include Multilayer Perception, SVMs, CNNs, and others. The goal is to find the best pattern recognition algorithm. variable classification methods have variable accuracy, the report demonstrates. Machine learning is used to identify symbols and numbers. A segment binary picture undergoes a "rough" categorization by the Bayesian Network or Neural Network for symbol initialization.*

**Keywords:** Feature extraction, Object recognition, Convolutional neural networks (CNNs), Real-time image enhancement