A Novel Method for Handwritten digit Recognition System

Team ID: PNT2022TMID04030
Team Members: Saliha Bathool A(Team lead)
Dharshini M R
Varshini S
Tata Sai Nandini

LITERATURE SURVEY

Here are a few of the earlier attempts to develop a novel technique for handwritten digit recognition.

S.No	Author&Year	Title	Methodology	Dataset used	Inferences
[1]	Ishani Patel, Virag Jagtap and Ompriya Kale	Feature Extraction Methods for Handwritten Digits Recognition	1. Feature extraction process. 2. Classification of feature vector into digits.	MNIST	ANN carried out the classification. Recognition based on Histogram of Oriented Gradientfeature. For classification of features, linear Proximal Support Vector Machine Classifier is proposed. Due to small training time, PSVM classifier is preferable over standard Support Vector Machine (SVM) Classifier

[2]	Rohini.M ,Dr. Surendran	A Novel Method For Hand written Digit Recognition System	Compare there sultsofCNN withDeepLearning algorithm like multilayer CNN using Keras withTheano and Tensorflow.	MNIST	According totheexperimentalresults, CNN model achieved thebest accuracy,which was97.69%.The trainlossvalue was0.0107.
[3].	Laxmi Narayana Pondhu, Govardhani Pondhu	Tuning Convolution Neural networks for Hand Written Digit Recognition	Achieve better accuracy with simpler models by tuning hyper-parameters of the model. Hyper parameter tuning is required for neural networks to improve the accuracy and to reduce the training time of neural networks.	Handwritten digits - Kaggle	It caneffectivelyclassify thedigits.The experimentalresult showsthat theproposedmodel is giving 99.54% on test set.
[4]	S. M. Shamim, Md Badrul Alam Angona Miah, Angona Sarker, Masud Rana, Abdulla Al Jobair	Handwritten Digit Recognition Using Machine Learning Algorithms	The main objective of this paper is to ensure effective and reliable approaches for recognition ofhandwritten digits. Several machines learning algorithm namely, Multilayer Perceptron,Support VectorMachine, NaïveBayes, Bayes Net, Random Forest, J48 and Random Tree.	WEKA	Machinelearningtechniques areusedtopredictthe handwritten digits.Experimentalresults showthat the handwritten digits canbeaccurately classified.

[5]	Ali Abdullah Yahya	A Novel Handwritten DigitClassification System Based on Covolutional Neural Network Approach	1.Thesize of the effective receptive field (ERF) is calculate. 2.data preparation is applied 3.data augmentation 4.add an additive whiteGaussian noisewith σ = 0.5	MNIST dataset	Calculating the size of the ERF helps us to select a typical filter size which leads to enhancing the classification accuracy of our CNN.CNN algorithm achieves state-of-theart results in handwritten digit recognition, with a recognition accuracy of 99.98 %and 99.40% with 50% noise.

URL References:

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