## A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM

## TEAM ID : PNT2022TMID04870

## LITERATURE SURVEY

| S.NO | PAPER | AUTHOR | YEAR | ACCURACY | METHOD AND ALGORITHM |
|---|---|---|---|---|---|
| 1 | Effective Handwritten Digit Recognition using deep Convolution Neural Network | Bharadwaj Yellapragada, Bhanu Prakash Kolla | 2020 | 98.51% | The model is composed of feature extraction with convolution and binary classification. Convolution and max-pooling are carried out to extract the features in the image,At end Flatten layer will flatten the images into a series of values that will be mapped to a dense layer of neurons that are connected to the categorical output layer of neurons.The neuron having the highest value is the predicted label for the image. |
| 2 | Handwritten Digit Recognition using CNN | Vijayalaxmi R Rudraswami math, Bhavanishankar K | 2019 | 98.07% | The user can either upload the image of the digit he wants to detect or the data from the MNIST dataset. The input images are pre-processed. Using the different classifiers the recognized digits' accuracy is compared and the result is obtained. The results obtained are displayed along with the accuracy. |
| 3 | Handwritten Digit Recognition | E. Lavanya | 2022 | >99% | A model of the convolutional neural network is developed and analyzed for appropriate totally different learning parameters to optimize recognition accuracy and |

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| | | | | | interval. we have a tendency to propose to research variants of CNN design with 3 layers (CNN_3L) and variants of CNN design with four layers (CNN_4L). a complete of six cases (case one to case 6) are thought of for CNN with three-layer design . |
| 4 | A Machine Learning and Deep Learning Approach for Recognizing Handwritten Digits | Ayushi Sharma, Harshit Bhardwaj, Arpit Bhardwaj,Aditi Sakalle, Divya Acharya,Wubshet Ibrahim. | 2022 | 98.83% | Optical character recognition (OCR) can be a subcategory of graphic design that involves extracting text from images or scanned documents.The Machine Learning and Depp Learning algorithms are used in this project to measure the accuracy of handwritten displays of letters and numbers |
| 5 | An improved zone based hybrid feature extraction model for handwritten alphabets recognition using euler number | O. P. Sharma, M. K. Ghose, and K. B. Shah | 2012 | 98.5% | An Improved Zone based Hybrid Feature Extraction Model using Euler Number, which not only improves the feature extraction process which was implemented in Diagonal Based Feature Extraction but also helps in efficient classification of the handwritten alphabets. |