Innovation Center for Education

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SVKM'S NMIMS

HANDWRITTEN DIGIT RECOGNITION PROJECT

PROJECT SYNOPSIS

HANDWRITTEN DIGIT RECOGNITION PROJECT

BACHELOR OF TECHNOLOGY

Computer Engineering

SUBMITTED BY

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Proposed Topic - Handwritten Digit Recognition Project

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Proposed Topic -Handwritten Digit Recognition Project

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INTRODUCTION

The capacity of computers to detect human handwritten digits is known as handwritten digit recognition. Because handwritten digits are not flawless and can be generated with a variety of tastes, it is a difficult assignment for the machine. The solution to this problem is handwritten digit recognition, which uses an image of a digit to recognize the digit present in the image.

The dataset which we will use to implement this project is the Mnist dataset. It consists of a training set of 60,000 examples, and a test set of 10,000 examples.

To implement this project we will use Deep Learning model convolutional neural network i.e, CNN. This technique can be used for feature extraction, feature mapping and classification.

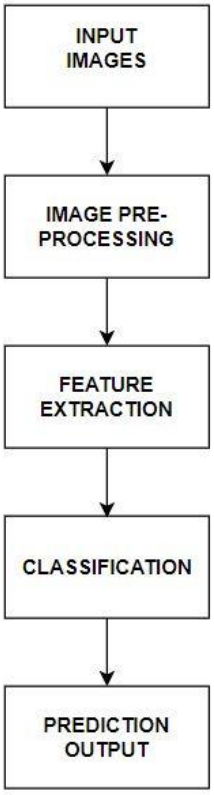

Fig – CNN Model Architecture.

We will also build a GUI using Tkinter. Tkinter is the de facto way in Python to create Graphical User interfaces (GUIs) and is included in all standard Python Distributions. In fact, it's the only framework built into the Python standard library.

METHODOLOGY/ PLANNING OF WORK

1. Analysis Of Problem Statement
2. Research on the topic
3. Requirements
4. Collect Dataset
5. Model Selection
6. Implementation Using Python
7. Build GUI/Interface
8. Results

FACILITIES REQUIRED FOR PROPOSED WORK

1. Jupyter Notebook
2. Laptop/ Computer
3. RAM- Min 2GB
4. Language- Python