PROBLEM STATEMENT:

A Novel Method for Handwritten Digit Recognition System:

The **handwritten digit recognition** is the capability of computer applications to **recognize** the human **handwritten digits**. It is a hard task for the **machine** because **handwritten digits** are not perfect and can be made with many different shapes and sizes. The **handwritten digit recognition system** is a way to tackle this problem which uses the image of a **digit** and recognizes the **digit** present in the image. Convolutional **Neural Network** model created using **PyTorch library** over the **MNIST dataset** to **recognize handwritten digits** .

Handwritten Digit Recognition is the capability of a computer to fete the mortal handwritten integers from different sources like images, pape rs, touch defenses, etc, and classify. them into 10 predefined classes **(0-9)**. This has been a Content of bottomless- exploration in the field of deep literacy. Number recognition has numerous operations like number plate recognition, postal correspondence sorting, bank check processing, etc . (2). In Handwritten number recognition, we face numerous challenges . because of different styles of jotting of different peoples as it . is not an Optic character recognition. This exploration provides a comprehensive comparison between different machine literacy and deep literacy algorithms for the purpose of handwritten number recognition. For this, we've used Support . Vector Machine, Multilayer Perceptron, and Convolutional . **Neural Network**. The comparison between these algorithms is carried out on the base of their delicacy, crimes, and .testing- training time corroborated by plots and maps that have been constructe d using **matplotlib** for visualization.