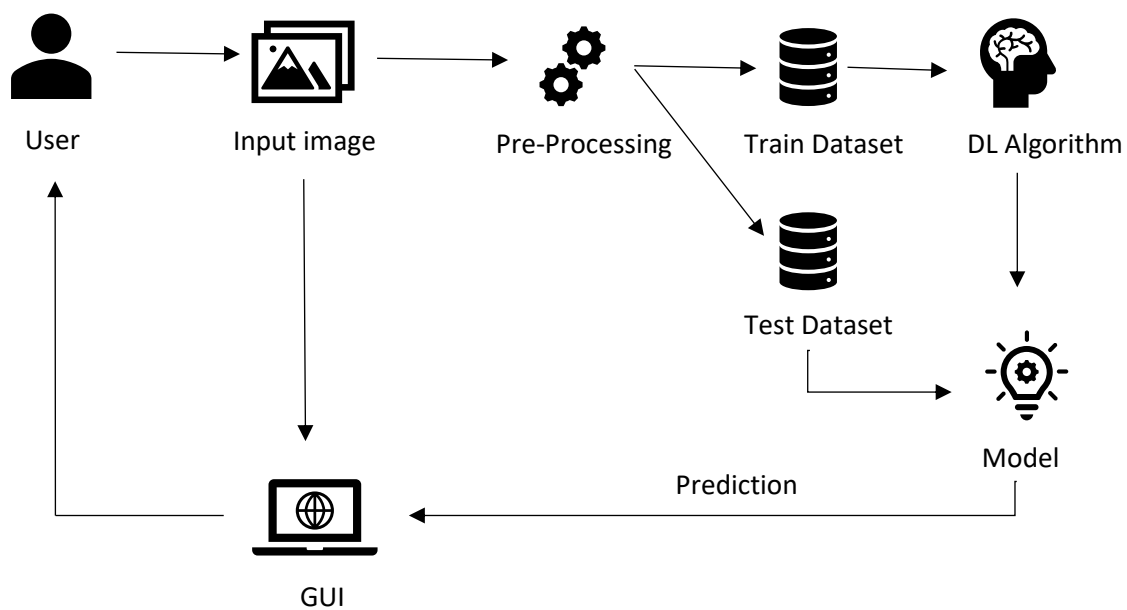


## Project Design Phase-I

### Solution Architecture

Date	05 October 2022
Team ID	PNT2022TMID52735
Project Name	A Novel Method for Handwritten Digits Recognition
Maximum Marks	4 Marks

### Solution Architecture:



### Project Description:

Handwritten Digit Recognition is the ability of a computer to receive and interpret intelligible handwritten input from sources such as paper documents, photographs, touch-screens and other devices. It is a hard task for the machine because handwritten digits are not perfect and can be made with many different flavours. The handwritten digit recognition is the solution to this problem which uses the image of a digit and recognizes the digit present in the image. The heart of the problem lies within the ability to use an efficient algorithm that can recognize hand written digits and which is submitted by users by the way of a scanner, tablet, and other digital devices. This paper presents an approach to off-line handwritten digit recognition based on deep learning technique. The main objective of this paper is to ensure effective and reliable approaches for recognition of handwritten digits. MNIST dataset is used for this recognition and it has 70,000 handwritten images.



VGG-16 (Visual Geometry Group) is used to recognize the digits. VGG-16 is a convolutional neural network that is 16 layers deep. GUI is created that allows users to upload pictures of handwritten numbers. The model examines the picture and produces the result in GUI.

