

Project Title : A Novel Method for Handwritten Digit Recognition System

Team ID : PNT2022TMID24124

Project Design Phase -1

1. CUSTOMER SEGMENT(S) One who wants to extract digits from handwritten text images	5. AVAILABLE SOLUTIONS Traditional systems of handwriting recognition have relied on handcrafted feature and prior knowledge. Checking with other people to affirm what number it is.	8. CHANNELS OF BEHAVIOUR Using softwares already available on the internet and getting help from those nearby to recognise digits written by their customer.
2. JOBS-TO-BE-DONE/ PROBLEMS Handwritten digits can be difficult to understand and interpret at times. It may cause errors when dealing with rough handwriting.	6. CUSTOMER CONSTRAINTS Unclear image will not give accurate results. The alternatives might result in errors and faults will be inconvenient	9. PROBLEM ROOT CAUSE Each and every person has a different handwriting; i.e: different jotting styles. Makes it tricky for programmers to provide enough examples of how each character might look. This investigation offers an in-depth comparison of various machine literacy and deep
3. TRIGGERS To obtain the numbers accurately and quickly. 4. EMOTIONS: BEFORE/ AFTER Feels frustrated and sad when numbers are not entered	7. BEHAVIOUR Customers should try with clear image and neat handwriting to get higher accuracy in digits. Designing the best software to detect digits accurately in an efficient manner.	10. YOUR SOLUTION The solution would be the development of a handwritten digit recognition system which uses Convolutional Neural Network model built with PyTorch and applied to the MNIST dataset. After the training and testing process, the accuracy rate reaches 99%.