Project Title : **A Novel Method for Handwritten Digit Recognition System**

Team ID : PNT2022TMID24119

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 inconvinient	**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%.