

PROBLEM - SOLUTION FIT:
PROJECT NAME : A NOVEL METHOD FOR HANDWRITTEN
DIGIT RECOGNITION SYSTEM
TEAM ID : PNT2022TMID32155

- 1. CUSTOMER SEGMENT(S):** Various customers like bank, school, college, post offices, etc., are the end users in this project .They are the major users of recognition of the digits.
- 2. JOBS-TO-BE-DONE:** Several numbers for each of the digits from 0 - 9 are needed to be given to the machine for analyzing.
- 3.PROBLEMS :** The machine cannot understand all the handwritings of the people present in this earth.Every aspects of the possibilities of the digits are needed to be analyzed.
- 4. TRIGGERS:** To quickly and precisely obtain the digits.
- 5. EMOTIONS - BEFORE and AFTER:** Customers become irritated and frustrated because of couldn't read the handwritten digits. They become confused and anxious as a result of misspellings in the works.
- 6. AVAILABLE SOLUTIONS :** There is no popular softwares available for digits. Only available for characters.
- 7. CUSTOMER CONSTRAINTS:** The customers need more accuracy than the usual softwares that are used for alphabets like,OCR .
- 8. BEHAVIOUR:** The software needed to be behave in such a way it should be interact with user friendly manner.
- 9. CHANNELS OF BEHAVIOUR:** The application should be useful to the banking and security Industries that are present in market.
The digits needed to be identified even if that is scribbled.
- 10. PROBLEM ROOT CAUSE:** Unlike character recognition , digits are not recognized so easily. Additionally, the Digits are used in various styles

which is very difficult to identified by the machine.

11. YOUR SOLUTION: A novel method for handwritten digit recognition system helps in recognizing the handwritten digits that uses CNN(Convolutional neural network) and ANN(Artificial neural network) are implemented over MNIST dataset for training the model. The model gets the several images for sample for the identification of the handwritten digit and recognizes the handwritten digit.