

## **PROBLEM - SOLUTION FIT:**

### **PROJECT NAME : A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM**

**TEAM ID : PNT2022TMID28422**

- 1. CUSTOMER SEGMENT(S):** Here customers are the one who is defined to work with reading handwritten digits. They are present in places like bank, school, college, post offices, etc.,.
- 2. JOBS-TO-BE-DONE / PROBLEMS :** There is a wide range of handwriting around the world. It is not possible to understand every handwriting precisely. It may lead to errors while dealing with rugged handwritings.
- 3. TRIGGERS:** To quickly and precisely obtain the digits.
- 4. EMOTIONS - BEFORE and AFTER:** Customers become irate and frustrated because they can't properly read the handwritten digits. They become confused and anxious as a result of not being able to finish their work on time.
- 5. AVAILABLE SOLUTIONS :** Currently there are no popular programs and softwares to detect the handwritten digits.
- 6. CUSTOMER CONSTRAINTS:** They believe such alternatives might result in mistakes and flaws and might not be practical.
- 7. BEHAVIOUR:** Designing the best software that more quickly and accurately identifies the handwritten digits.
- 8. CHANNELS OF BEHAVIOUR:** Utilizing software that is offered in the online market. Enlisting the assistance of nearby people in order to identify the numbers that their clients have scribbled.
- 9. PROBLEM ROOT CAUSE:** Because handwritten number recognition is not an optical character recognition, there are numerous difficulties due to the wide variety of writing styles used by different people. Customers find it difficult to read the handwritten digits as different people use different writing styles and different languages. This investigation offers a thorough comparison of various deep literacy and machine literacy algorithms for handwritten number recognition.

**10. YOUR SOLUTION:** A novel method for handwritten digit recognition system helps in recognizing the handwritten digits that uses MNIST dataset for training the model. The model gets the image of the handwritten digit and recognizes the handwritten digit. Convolution neural networks algorithm is used over the MNIST dataset to recognize the handwritten digits.