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

**Project Design Phase-I - Solution Fit**

**Team ID:** PNT2022TMID46690

## Problem-Solution fit canvas 2.0

Purpose / Vision

### 1. CUSTOMER SEGMENT(S) — CS

*One who wants to extract digits from handwritten text images*

### 6. CUSTOMER CONSTRAINTS — CC

*Unclear image will not give accurate results.*

### 5. AVAILABLE SOLUTIONS

*Traditional systems of handwriting recognition have relied on handcrafted feature and a large amount of prior knowledge.*

Define CS,fit into CC

Explore AS, differentiate

### 2. JOBS-TO-BE-DONE / PROBLEMS — J&P

*People can struggle to read others' handwriting*. The handwritten digits *are* not always of the same size, width, orientation as they differ from writing of person to person, so the general problem would be while classifying the digits.

### 9. PROBLEM ROOT CAUSE — RC

*The issue is that there's a wide range of handwriting - good and bad. This makes it tricky for programmers to provide enough examples of how every character might look.*

### 7. BEHAVIOUR — BE

*Customers must try with clear image and neat handwriting to get accuracy in digits*

Focus on J&P, tap into BE, understand RC

Focus on J&P, tap into BE, understand RC

### 3. TRIGGERS — TR

*When there is need* for recognition of handwritten digits

### 4. EMOTIONS: BEFORE / AFTER — EM

*frustration, exhausted > curious, satisfied*

### 10. YOUR SOLUTION

*It uses Artificial Neural Network to recognize them. Neural Network is used to train and identify written digits. After training and testing, the accuracy rate* reached 99%. This accuracy rate is very high.

### 8. CHANNELS of BEHAVIOUR — CH

**8.1 ONLINE**

*Extract online channels from behaviour block*

**8.2 OFFLINE**

*Extract offline channels from different handwriting styles*

Identify strong TR & EM

Extract online & offline CH of BE



AMALTAMA