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

Project Design Phase-I - Solution Fit Template

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Define CS, fit into CC

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.

Explore AS, differentiate

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

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

Identify strong TR & EM

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

Extract online & offline CH of BE