Project Design Phase-I
Problem – Solution Fit Template

Date	19 September 2022
Team ID	PNT2022TMID50525
Project Name	A Novel method for handwritten digit recognition system
Maximum Marks	2 Marks

Project Title: A Novel Method For Hand Written Digit Recognition

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Define CS, fit into CC			Explore AS, differentiate
	1. CUSTOMER SEGMENT(S) A officer in a post office receiving letters and couriers in a written format.	**6. CUSTOMER CONSTRAINTS** It is a difficult because most person's handwriting will not similar, scanner or camera work perfect in perfect light condition, It took to much time to process.	**5. AVAILABLE SOLUTIONS** Various people's handwriting should be used for train the AI. That should improve the accuracy. Traning the model in a proper way to get the better outcome.

Focus on J&P, tap into BE, understand			Focus on J&P, tap into BE, understand
	2. JOBS-TO-BE-DONE / PROBLEMS He/She Wants To Store The Pincode Or Mobile Number Etc… Into A Storage Space . So A Hand Written Digit Recognition System Is Needed To Solve Those Problems.	**9. PROBLEM ROOT CAUSE** A small recognition error may cause the big difference in the end result.	**7. BEHAVIOUR** Before Processing The Image Application Should Verify The Photo Was Taken In Correct Angle And Correct Lighting. User Should Completely Aware Of Instruction Of Application.

Identify strong TR & EM

3. TRIGGERS
TR

To do the work in a efficient manner. So that the officer getting satisfied.

4. EMOTIONS: BEFORE / AFTER
EM

BEFORE: They eagerly wants to finish is work quickly and easily .
AFTER: If its working fine they feels better.

10. YOUR SOLUTION SL

The handwritten recognition model takes an image as
an input and compare the preprocessed digits with the
trained datasets and give the output of digits
as a text well as pen-up/pen
format.

8. CHANNELS of BEHAVIOUR CH

8.1 ONLINE
Online handwriting recognition involves the automatic
conversion of text as it is written on a special digitizer
where a sensor picks up the pen-tip movements as
well as pen-up/pen-down switching.

8.2 OFFLINE
K-NN combined with preprocessing methods can
achieve great performance apart from Neural
Network when used as a classification algorithm
in offline handwritten digit recognition.