Project Title: A Novel Method for Handwritten Digit Recognition System

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Project Design Phase-I - Solution Fit

Define CS, fit into CL

1. CUSTOMER SEGMENT(S) — CS

People who want to read handwritten numbers from the paper (bank staff for processing bank cheque, Teachers for evaluating papers)

6. CUSTOMER LIMITATIONS — CL

Blurred and damaged image will not give accurate solution

5. AVAILABLE SOLUTIONS — AS

Traditional handwritten digit recognition systems have relied heavily on handcrafted features and extensive prior knowledge.

Explore AS, differentiate

Focus on PR, tap into BE, understand RC

2. PROBLEMS / PAINS — PR

People may face difficulties while reading the handwritten images. Handwritten digits are not always of the same style, size and position, not easily understandable. As they differ from person to person. The problem is to classify the digits.

9. PROBLEM ROOT / CAUSE — RC

People may face difficulties while reading the handwritten images. Handwritten digits are not always of the same style, size and position, not easily understandable. As they differ from person to person. The problem is to classify the digits.

7. BEHAVIOR — BE

Client must use this system with clear image and good handwriting to get better results.

Focus on PR, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS TO ACT — TR

When the person wants a digitalized format of the handwritten digits

4 EMOTIONS BEFORE / AFTER — EM

Confused, irritated, tension, exhausted > convinced, curious, satisfied

10. YOUR SOLUTION — SL

It uses VGG-16 (Visual Geometry Group) to recognize the digits. It comes under Convolutional Neural Network. Neural Network is used to train and identify written digits. After training and testing the accuracy will be increase.

8. CHANNELS of BEHAVIOR — CH

ONLINE

Extract channels from Behavior block

OFFLINE

Extract channels from different handwritten images

Extract online & offline CH of BE