Project Design Phase-I - Solution Fit Template

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

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Define CS, fit into CC

1.CUSTOMER SEGMENT(S): CS

- Medical Shop Workers
- Migrants
- Post office Workers
- Bank Workers

6. CUSTOMER CONSTRAINTS CC

- Network Connection
- Available Devices
- Spending power
- Accuracy
- Accessibility
- Spending time
- Difficulty in usage

5. AVAILABLE SOLUTIONS AS

- In the past they have developed the handwritten recognition system for English alphabets using Neural networks.
- Sunspot drawing handwritten character recognition system based on deep learning.
- The cons in the system is it can recognize only the specific languages.

Explore AS, differentiate

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

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

- In order to help the people to recognize all the languages, one system must be designed.
- Same languages can be written in different formats by different people. So, a system must be designed to recognize all these formats in the same languages.

9. PROBLEM ROOT CAUSE RC

- Preventable medication errors affect more than 1.5 million people around the world annually. These errors are caused by unclear, illegible handwriting of doctors.
- Illegible handwriting leads to loss of information in post cards.
- Migrants couldn't understand other than regional languages.

7. BEHAVIOUR BE

- Customer can use a Novel Method Digit Recognition system to meet all their expectations.

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

3. TRIGGERS TR

- When other application works efficiently in lower bandwidth.

4. EMOTIONS: BEFORE / AFTER EM

- User will become happy when the system Is very fast and reliable.
- The user will become frustrated when it takes long time for functioning.

10. YOUR SOLUTION

- A Novel Method for Handwritten digit recognition system using MNIST dataset uses convolution Neural Network to train these images and build a deep learning model.
- Web Application is created where the user can upload an image of a handwritten digit.
- This image is analyzed by the model and the detected result is returned on to UI.

8. CHANNELS OF BEHAVIOUR CH

8.1 ONLINE:

In the online mode, user can upload image file and will get the most probable recognition text.

8.2 OFFLINE:

In the offline mode, user can store the image file in this device, which needs to be recognized later.