Project Title: A Novel method for Handwritten Digit Recognition System

**project Design Phase-I** - **Solution Fit Template Team ID:** PNT2022TMID09867

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| **Define CS, fit into CC** | **1. CUSTOMER SEGMENT(S) CS**  Customer who need to identify the digit from handwritten form | **6. CUSTOMER CONSTRAINTS CC**  It requires much more computation than more standard OCR techniques | **5. AVAILABLE SOLUTIONS AS**  Handwritten digit recognition using MNIST dataset is a major project made with the help of Neural Network.It basically detects the scanned images of handwritten digits | **Explore AS, differentiate Focus on J&P, tap into BE, understand RC** |
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| **Focus on J&P, tap into BE, understand RC** | **2. JOBS-TO-BE-DONE / PROBLEMS J&P**  Diffferent people handwriting varies from each other and they struggle to identify | **9. PROBLEM ROOT CAUSE RC**  **From the number 0 to 9 it’s shapes and design are vary.Further according to individual person their handwriting also varies.Thus this handwritten digit recognition is needed** | **7. BEHAVIOUR BE**  The output of an OCR run for an clear image and comparing it to the original version of the same text gives good accuracy |

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| **Identify strong TR & EM** | **3. TRIGGERS TR**  While they recognition the handwritten digit | **10. YOUR SOLUTION SL**  Neural Network is used to recognise and predict the handwritten digits.Dataset are trained using gradient descent back propagation algorithm and tested using the feed forward algorithm.  Observing the system performance with variation of number of hidden units and iteration.Using this method, digits recognised and its accuracy will be high upto 99% .So we get good output | **8.CHANNELS of BEHAVIOUR CH**   * 1. **ONLINE**   Here extract from block   * 1. **OFFLINE**   Here extract from different user for handwriting | Extract online & offline CH of BE |
| **4. EMOTIONS: BEFORE / AFTER EM**  Dilemma,exhausted into satified ,hopeful and comfort |
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