

Project Design Phase-I

Problem –Solution Fit Template

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| Date | 27 September 2022 |
| Team ID | PNT2022TMID22650 |
| Project Name | A Novel Method for Handwritten Digit Recognition System |
| Maximum Marks | 2 Marks |

Problem –Solution Fit Template

Problem-Solution fit canvas 2.0
Purpose / Vision

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|-------------------------|--|--|--|-----------------------------------|
| Define CS fit into CC | 1. CUSTOMER SEGMENT(S) CS <i>One who wants to extract digits from handwritten text images</i> | 6. CUSTOMER CONSTRAINTS CC <i>Unclear image will not give accurate results.</i> | 5. AVAILABLE SOLUTIONS <i>Traditional systems of handwriting recognition have relied on handcrafted feature and a large amount of prior knowledge.</i> | Explore AS, differentiate |
| | 2. JOBS-TO-BE-DONE / PROBLEMS J&P <i>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.</i> | 9. PROBLEM ROOT CAUSE RC <i>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.</i> | 7. BEHAVIOUR BE <i>Customers must try with clear image and neat handwriting to get accuracy in digits</i> | |
| Identify strong TR & EM | 3. TRIGGERS TR <i>When there is need for recognition of handwritten digits</i> | 10. YOUR SOLUTION <i>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.</i> | 8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE <i>Extract online channels from behaviour block</i> | Extract online & offline CH of BE |
| | 4. EMOTIONS: BEFORE / AFTER EM <i>frustration, exhausted > curious, satisfied</i> | | 8.2 OFFLINE <i>Extract offline channels from different handwriting styles</i> | |

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