

Project Design Phase-I - Solution Fit Template

Project Title: A Novel Method for Handwritten Digit Recognition System

Project ID:PNT2022TMID39478

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Customers are those who work with handwritten numbers in places like banks, schools, colleges, railroads, etc.	6. CUSTOMER CONSTRAINTS CC <ul style="list-style-type: none">➤ Lack of reliable internet connections, unavailability of gadgets like mobile phones and computers, inaccessibility of appropriate cameras.➤ Because handwritten numbers are not always accurate and might have a wide variety of tastes, it is a difficult work for the computer.➤ This issue can be solved by using an image of a digit to identify the digit that is present in the image, which is done through handwritten digit recognition.	5. AVAILABLE SOLUTIONS AS <ul style="list-style-type: none">➤ Although there are current alternatives to this approach, they are not very precise, robust, or rotation- and variation-invariant.➤ The ability of a computer to honor the mortal handwritten characters from many sources, including as photographs, papers, and touch input.	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <ul style="list-style-type: none">➤ It is really challenging to comprehend and analyze the handwritten numbers.➤ More training data required.➤ Hard to recognize digits, dim lighting, weak eyesight.	9. PROBLEM ROOT CAUSE RC <p>Hand-written digits are in varying fonts and sizes, thus they are becoming increasingly difficult to ascertain due to various factors such as weakening eye-sight, time constraints, etc.</p>	7. BEHAVIOUR B <ul style="list-style-type: none">➤ Finding the best software that more quickly and accurately identifies digits.➤ Customer wants reliable internet connections and high-quality cameras.	

Identify strong TR & EM	3. TRIGGERS <ul style="list-style-type: none"> ➤ Obtain the data quickly and accurately. ➤ The exchange of information is made simple and is one of the simplest ways to speak with a computer and grasp the language. 	10. YOUR SOLUTION <ul style="list-style-type: none"> ➤ The solution aims to reliably recognize hand-written digits using Convolutional Neural Network (CNN) algorithm. Therefore, reducing costs for the company and increasing worker productivity. 	8. CHANNELS OF BEHAVIOUR <p>8.1 ONLINE</p> <ul style="list-style-type: none"> ➤ The processing and uploading of the photographs both require a steady internet connection. <p>8.2 OFFLINE</p> <ul style="list-style-type: none"> ➤ Purchase contemporary electronics and confirm their functionality. 	Identify strong TR & EM
	4. EMOTIONS: BEFORE / AFTER <p>BEFORE: Uncertain, Reserved, and Perplexed.</p> <p>AFTER: Assured, Upright, and Rational.</p>			