

**Ideation Phase**  
**Define the Problem Statements**

Date	05 October 2022
Team ID	PNT2022TMID23384
Project Name	A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM
Maximum Marks	2 Marks

PARAMETER	DESCRIPTION
<b>PROBLEM STATEMENT</b>	<ul style="list-style-type: none"><li>• To classify handwritten digits.</li><li>• To take an image of a handwritten digit and determine what that digit and character is.</li></ul>
<b>What does the problem affect?</b>	<ul style="list-style-type: none"><li>• Handwritten text tends to have unique and diverse styles. This makes handwritten text digitization a complex process to implement in a universal scale.</li></ul>
<b>What are the boundaries of the problem?</b>	<ul style="list-style-type: none"><li>• Handwritten text isn't necessarily of common size, color, angle, dimensions, etc.</li><li>• A robust handwriting recognition system must accommodate these parameters.</li></ul>
<b>What is the issue?</b>	The handwritten digits are not always of the same size, width, orientation and justified to margins as they differ from writing of person to person, so the general problem would be while classifying the digits due to the similarity between digits such as 1 and 7, 5 and 6, 3 and 8, 2 and 5, 2 and 7, etc.

<b>When does the issue occur?</b>	This issue occurs especially when the quality or legibility of handwritten text is atrocious to the extent that conventional systems may not have the capacity to handle it.
<b>Why is it important that we fix the problem?</b>	The high variance in handwriting styles across people and poor quality of the handwritten text compared to printed text pose significant hurdles in converting it to machine readable text. Nevertheless, it's a crucial problem to solve for multiple industries like healthcare, insurance and banking.