

Project Design Phase-I
Proposed Solution

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| Date | 19 September 2022 |
| Team ID | PNT2022TMID38424 |
| Project Name | Project - A Novel Method for Handwritten Digit Recognition System |
| Maximum Marks | 2 Marks |

Proposed Solution:

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | <ul style="list-style-type: none">✓ An optimized way to recognize and predict the handwritten digit with increased accuracy (expecting to achieve results more than 97% accuracy), low run time and low memory requirements. |
| 2. | Idea / Solution description | <ul style="list-style-type: none">✓ The idea is to calculate features that make it possible to distinguish between different numbers.✓ Some example features for this dataset might include the number of colour pixels, or maybe the width and the height of the digits and use the SVMS algorithm to optimize the prediction.✓ However, generally just the algorithm is not enough to get optimal classification rates.✓ Another important aspect to improve scores is feature extraction.✓ Although the other algorithms might not be what you are looking for, it is possible that adding more features can improve the performance of the algorithm you are currently using as well. |
| 3. | Novelty / Uniqueness | <ul style="list-style-type: none">✓ Precisely recognise and predict the uploaded document and canvas drawn digits using the SVMS algorithm and the feature extraction aspect. |

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| 4. | Social Impact / Customer Satisfaction | <ul style="list-style-type: none"> ✓ It helps the postal department, banking sector and traffic department. ✓ It also helps the old age humans with less eye sight |
| 5. | Business Model (Revenue Model) | <ul style="list-style-type: none"> ✓ We can generate revenue by advertisement part of our website and application play store revenue. ✓ We are aiming to collaborate with banking sectors, postal sectors and traffic control department to use our project in recognising cheque digits, zip code and number plate digit. ✓ We share the profit by group driveways. |
| 6. | Scalability of the Solution | <ul style="list-style-type: none"> ✓ The scalability of our solution is to get accuracy of around 97% or more and also to grow exponentially in revenue. |