

## Project Design Phase 1

### Proposed Solution

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| Team id      | PNT2022TMID33236   |
| Project name | <b>A Novel System Method for Handwritten Digit Recognition</b> |

### Proposed Solution Template

| Sl.NO | Parameters                | Description   |
|-------|---------------------------|---|
| 1.    | Problem statement         | The handwritten digit recognition is the capability of computer application to recognize the human handwritten digits. it is the hard task for the machine because handwritten digits are not perfect and can be made with many different shapes and size   |
| 2.    | Idea/Solution Description | Import the required data set . Process the data & create the Model. Train the model & evaluate the model. the digit should be written correctly to recognition .test the model  |
| 3.    | Novelty /uniqueness       | A key confound is the presence of novelty, which has continued to stymie even the best machine learning-based algorithms for these tasks. In handwritten documents, novelty can be a change in writer, character attributes, writing attributes, or overall document appearance, among other things. Instead of |

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|-----------|---------------------------------------|--|
|           |                                       | looking at each aspect independently, we suggest that an integrated agent that can process known characters and novelties simultaneously is a better strategy  |
| <b>4.</b> | Social Impact / Customer Satisfaction | Postal department and courier services can easily find the digits written.<br>Old people who will have eye sight issues with handwritten digits.   |
| <b>5.</b> | Business Model (Revenue Model)        | Baking sector and Postal sector by providing the services  |
| <b>6.</b> | Scalability of the Solution           | Recognition of handwritten digit is one of the popular problem associated with computer vision applications. The goal of our research work is to develop scalable Neural Network(NN) and Convolutional Neural Network (CNN) model that would be able to recognize and determine the handwritten digits from its image. Capability of developing the new algorithms and improve the existing algorithms is determined by the accuracy and speed factor for training and testing the models. |