Project Design Phase-IProposedSolutionTemplate

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| Date | 15.10.2022 |
| Team ID | PNT2022TMID09867 |
| ProjectName | A NOVEL METHOD FOR HANDWRITTING DIGIT RECOGNITION SYSTEM |
| MaximumMarks | 2 Marks |

**ProposedSolutionTemplate:**

Projectteamshallfillthefollowinginformationinproposedsolutiontemplate.

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to besolved) | Problem Statement: Handwritten Digit Recognition  This is a collection of thousands of handwritten pictures used to train classification models using Machine Learning techniques. As a part of this problem statement, we will train a multi layer perceptron using Tensorflow -v2 to recognize the handwritten digits. |
| 2. | Idea/Solutiondescription | IDEA SOLUTIONS is a progressive, state of the art Information Technology company located in Southern Maryland. We have a proven track record of customer satisfaction with our clients, ranging from  mid-size corporations to government offices and agencies. We increase our clients’ efficiency and productivity by effectively implementing new IT systems and/or managing their existing systems |
| 3. | Novelty/Uniqueness | This paper introduces an agent-centric approach to handle novelty in the visual recognition domain of handwriting recognition (HWR). An ideal transcription agent would rival or surpass human perception, being able to recognize known and new characters in an image, and detect any stylistic changes that may occur within or across documents. 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 looking at each aspect independently, we suggest that an integrated agent that can process known characters and novelties simultaneously is a better strategy. This paper formalizes the domain of handwriting recognition with novelty, describes a baseline agent, introduces an evaluation protocol with benchmark data, and provides experimentation to set the state-of-the-art. |

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| 4. | SocialImpact/ CustomerSatisfaction | The Kano model is one of the models that help determine which features must be included in a product or service to improve customer satisfaction. The model is focused on highlighting the most relevant attributes of a product or service along with customers’ estimation of how the presence of these attributes can be used to predict satisfaction about specific services or products. This research aims to develop a method to integrate the Kano model and data mining approaches to select relevant attributes that drive customer satisfaction, with a specific focus on higher education. The significant contribution of this research is to solve the problem of selecting features that are not methodically correlated to customer satisfaction, which could reduce the risk of… |
| 5. | Business Model(RevenueModel) | Before we delve into the different types of revenue models, we should spend a little time differentiating between the terms "business model", "revenue model", and "revenue stream", as they are very often used interchangeably. In the [GlowingStart](http://glowingstart.com/) article, "[What Is The Difference Between A Revenue Model, Revenue Stream And A Business Model](http://glowingstart.com/difference-revenue-model-revenue-stream-business-model/)", [Alex Genadinik](https://twitter.com/genadinik) does a great job explaining the difference between those terms. They are summarized below:   * A revenue stream is a company’s single source of revenue. A company can have zero or many revenue streams, depending on its size. * A revenue model is the strategy of managing a company’s revenue streams and the resources required for each revenue stream. * A business model is the structure comprised of all aspects of a company, including revenue model and revenue streams, and describes how they all work together. |
| 6. | ScalabilityoftheSolution | The contribution by Schabel *et al*. from North Carolina State University presents multifunctional data-centric accelerators (MDCAs) with dynamic datapath configuration for artificial neural network processors. Energy and area are traded off with reconfigure-ability as quality metrics of hardware flexibility.  Rovere *et al*. from ETH Zurich and Miromico AG propose a wake-up circuit with adaptive activity-sampling rate scaling. Being triggered upon event occurrence, the digital classifier is asynchronous and trained to minimize false positives to make the energy-quality tradeoff more favorable. The concept is applied to hand gesture recognition, and pathologic ECG beat detection |