Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID33686
Project Name	Project - *Natural Disasters Intensity Analysis And Classification Using Artificial Intelligence*
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The proposed multilayered deep convolutional neural network was simulated on the computer system with Core i7, Central Processing Unit 2.8 GHZ with 16 GB RAM in MATLAB 2018a and different types of results were calculated.
2.	Idea / Solution description	It defines the overall method for natural disaster intensity analysis and classification based on multi-spectral images using a multilayered deep convolutional neural network. Moreover, this method consists of two blocks of a convolutional neural network.
3.	Novelty / Uniqueness	To evaluate the performance of the proposed multilayered deep convolutional neural network, uses a train–test validation schema. To train the whole model, the training dataset was used, while for the fine-tuning of model the validation set was used. The performance of the whole framework was calculated on the basis of the test dataset.

4.	Social Impact / Customer Satisfaction	However, the detection of natural disasters by using deep learning techniques still faces various issues due to noise and serious class imbalance problems. To address these problems, we proposed a multilayered deep convolutional neural network for detection and intensity classification of natural disasters.
5.	Business Model (Revenue Model)	The proposed model achieved the highest accuracy as compared to other state-of-the-art methods due to its multilayered structure. The proposed model performs significantly better for natural disaster detection and classification, but in the future the model can be used for various natural disaster detection processes.
6.	Scalability of the Solution	The overall accuracy for the whole model is 99.92%, which is competitive and comparable with state-of-the-art algorithms.