

NATURAL DISASTERS INTENSITY ANALYSIS AND CLASSIFICATION USING ARTIFICIAL INTELLIGENCE

Proposed Solution

Natural disaster intensity analysis and classification based on multispectral images using a multilayered deep convolutional neural network. Moreover, this method consists of two blocks of a convolutional neural network. The first block detects a natural disaster occurring and the second one defines the intensity type of the natural disaster. Additionally, the first block consists of three mini convolutional blocks with four layers each, including an image input and fully connected layers. On the other hand, the second block also consists of three mini convolutional blocks with two layers each and includes an image input layer and fully connected layer. 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. The proposed model works on an image dataset to detect and classify the natural disasters.

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Due to topographical considerations of the various sites, most rescue operations cannot be conducted, and victims cannot be identified.
2.	Idea / Solution description	Systematic disaster prediction method might be useful to the responsive team of disaster and people as well
3.	Novelty / Uniqueness	The department members of disaster will get alert earlier by CCTV footage
4.	Social Impact / Customer Satisfaction	Receiving alert earlier will makes public safety and awareness.
5.	Business Model (Revenue Model)	-
6.	Scalability of the Solution	Capable of predicting the symptoms.