OBJECTIVES

We can Able to lean few concepts which is related to natural Disaster Intensity and analysis using AI/ML such as:

- Know fundamental concepts and techniques of the Artificial Neural Network and Convolution Neural Networks
- Gain a broad understanding of image data.
- Work with Sequential type of modelling
- Work with Keras capabilities
- Work with image processing techniques
- Work with OpenCV

This project describes the design and experimental evaluation of natural disaster intensity analysis and classification using artificial intelligence. The approach implemented here is based on convolutional neural network. The proposed multi-layered deep convolutional neural network method works in two blocks of convolutional neural networks. The proposed method works in two blocks—one for detection of natural disaster occurrence and the second block is used to remove imbalanced class issues. The first block, known as Block-I Convolutional Neural Network (B-I CNN), detects the occurrence of a natural disaster and the second one, known as Block-II Convolutional Neural Network (B-II CNN), defines the intensity of the natural disaster. Additionally, the first block consists of three mini convolutional blocks with four layers each and includes 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, including an image input layer and fully connected layer. 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.