

NATURAL DISASTER INTENSITY ANALYSIS AND CLASSIFICATION USING ARTIFICIAL INTELLIGENCE



TEAM ID : PNT2022TMID50187

TEAM MEMBERS:

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OBJECTIVES :

- Improve the understanding of disaster risk,hazards,and vulnerabilities.
- Strengthen disaster risk governance at all levels from local to centre.
- Invest in disaster risk reduction for resilience through structural,non structural and financial measures,as well as comprehensive capacity development.
- Enhance disaster preparedness for effective response
- Promote “Build Back Better” in recovery ,resiliencies and reconstruction.

PROJECT DESCRIPTION :

Natural disasters not only disturb the human ecological system but also destroy the properties and critical infrastructure of human societies and even lead to permanent change in the ecosystem. Disaster can be caused by naturally occurring events such as earthquakes,cyclone,tsunami,floods and wildfires.Many deep learning techniques have been applied by various researchers to detect and classify the natural disaster to overcome losses in ecosystem but detection of natural disasters still faces issues due to the complex and imbalanced structures of images.To tackle this problem ,we developed a multi-layered deep

convolutional neural network model that classifies the natural disaster and tells the intensity of disaster of natural the model uses an integrated webcam to capture the video frame and the video frame is compared with the pre-trained model and the type of disaster is identified and showcased on the OpenCV window.

PROJECT FLOW :

- The user interacts with the UI to open the integrated webcam
- The video frames are captured and analysed by the model which is integrated with flask application.
- Once model analyses the video frames the prediction is showcased on the UI and OpenCV window.

TECHNICAL ARCHITECTURE:



