PROJECT OBJECTIVES

- When using AI to detect extreme events such as avalanches or earthquakes, the availability of data can be a limiting factor. AI-based methods can be very effective if a training dataset covers very large events. However, the availability of such data is limited because of the rarity of these events.

- Artificial intelligence (AI), in particular machine learning (ML), is playing anincreasingly important role in disaster risk reduction (DRR) – from the forecasting of extreme events and the development of hazard maps to the detection of events in real time, the provision of situational awareness and decision support, and beyond.

➢ Integrating frontier technologies including Artificial Intelligence (AI) into existing emergency systems can harness the potential of existing datastreams and improve hazard mitigation and disaster management.

➢ AI can also enhance earthquake detection and tsunami warning using geological information from research centers around the world. Building up reliable datasets for such events is crucial, webinar speakers said. Wildfires can also be studied in real time and detected earlier based on multi-sourced data

➢ With the help of a neural network, it is possible to predict floods and savethe masses from the disaster. By implementing a convolutional neural network and Modified Particle Swarm Optimization (MPSO), Padma war et al. developed a deep learning approach to foresee the flood circumstances and identify the individuals beforehand.

➢ Prevent disasters and achieve substantial reduction of disaster risk and losses in lives, livelihoods, health, and assets (economic, physical, social, cultural and environmental).Floods are a calamitous and remarkable disaster. Floods impact greatly on human lives, economically and financially affecting nations.

➢ The objectives of this project can be summarized as follows:

➢ We will be able to learn how to get and prepare the dataset.

➢ We will be able to know how to do image processing.

➢ We will understand how CNN layers are work.

☐ Providing relief to the affected people.

☐ Preparing for actions to be taken at the time of disaster.

☐ Assessing the damage caused.

☐ Arrangement of rescue for the affected.

☐ Rehabilitation and rebuilding the affected area.

The objectives of disaster management are:

➢ Safeguard and make available vital materials

➢ supplies and equipment to ensure the safety and recovery of records from predictable disasters

➢ Identifying the hazard and its cause.

➢ Assessing, reviewing and controlling the risk.

➢ Reduce the risk of disasters caused by human error, deliberate destruction, and building or equipment failures

➢ Be better prepared to recover from a major natural catastrophe

➢ The objectives of disaster management are as follows:

➢ Improving tolerance.

➢ Preventing losses and dangers.

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