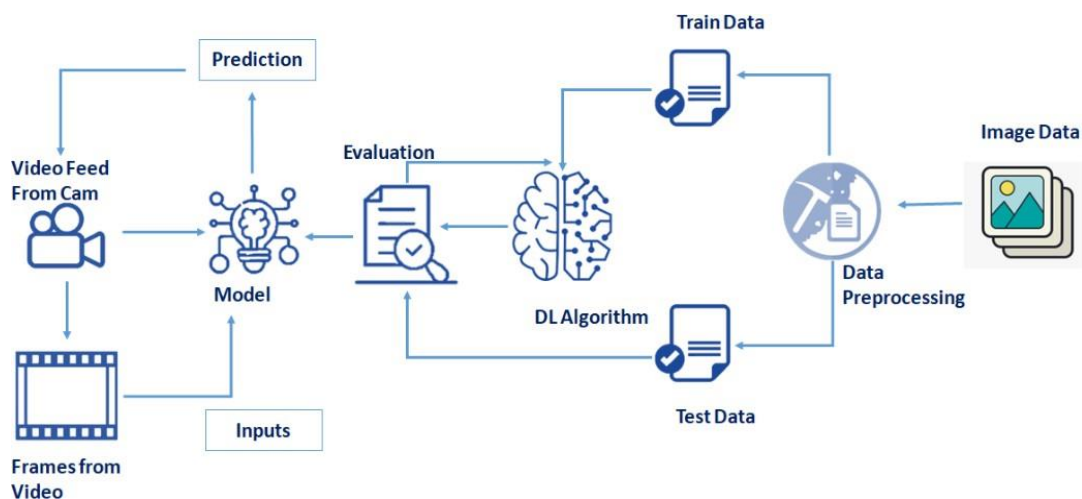# NATURAL DISASTERS INTENSITY ANALYSIS AND CLASSIFICATION USING ARTIFICIAL INTELLIGENCE

PROBLEM STATEMENT:

- Natural Disaster one of most inevitable disasters, it can be caused by naturally occurring events such as earthquakes, cyclones, floods, and wildfires.
- A natural disaster can cause loss of life or damage property like buildings will collapse due to seismological effects, and typically leaves some economic damage in its wake. diseases/viruses spread and sometimes natural disasters can devastate nations.

- Many deep learning techniques have been applied by various researchers to detect and classify natural disasters to overcome losses in ecosystems, but detection of natural disasters still faces issues due to the complex and imbalanced structures of images.

AN ARCHITECTURE FOR THE SOLUTION:

- The defined problem statements lead to focus on building a multi-layered deep Convolutional Neural Network (CNN) model that classifies the natural disaster and monitors the intensity of its occurence.
- For detection, an integrated webcam is used to capture the video frame and is compared with the pre-trained model and the type of disaster is identified and showcased on the user interface.

ANSWERING THE W's OF THE PROBLEM:

QUESTION	DESCRIPTION
Who does the problem affect?	Public and their livelihood, livestocks, economy,infrastructures and Ecological Conditions
What are the Boundaries of the problem?	From the geographical areas, covering the people inhabiting, and the body in charge of disaster management
What is the Issue?	Occurrence of several Natural Disasters across regions and time, causing loss of life, property, services, social, economical and environmental disruption
When is the Issue occurring?	Change in Climatic conditions, severe thunderstorms, wind pattern changes, human carelessness, greenhouse effects, seismic movements
Where is the Issue occurring?	Places which had been vulnerable and often hit by natural disasters, coastal regions, over-constructed regions,etc.
Why is it important that we fix the problem?	To save lives of people, minimize the loss of infrastructure, maintain financial stability, getting funds from government to repair the minimal damages, and forecast awareness

Submitted By:

SHARVESH P S | 732219CS097
SATHISHKUMAR P | 732219CS094
PRADEEP M | 732219CS083
SENTHILNATHAN R | 732219CS095