Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID17906
Project Name	Natural Disaster Intensity Analysis and Classification using Artificial Intelligence
Maximum Marks	4 Marks

Technical Architecture:

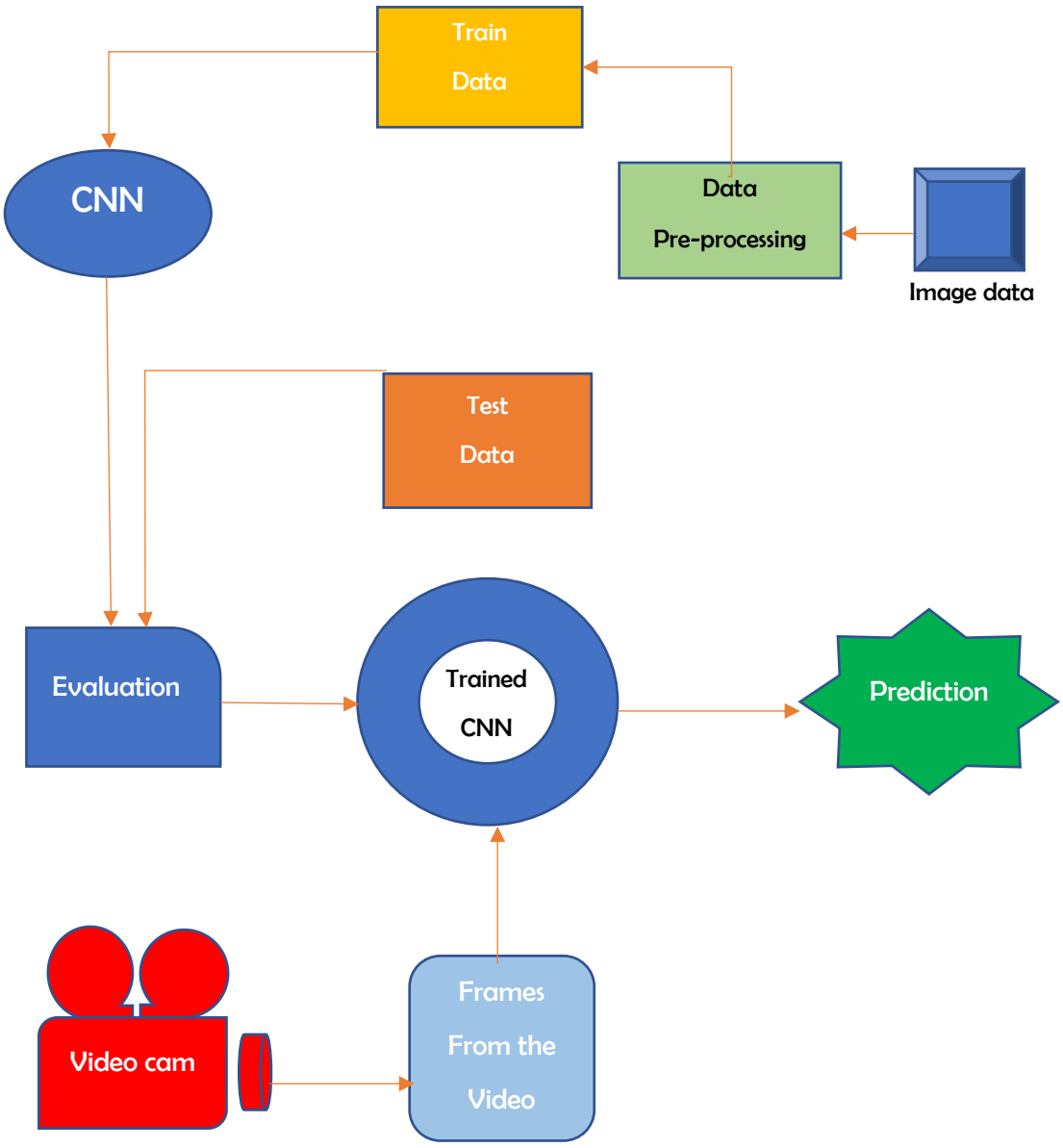

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user can upload disaster image / video only via the user interface.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Obtain input frames from the user and send it to the trained model.	Python /Flask/OpenCV
3.	Application Logic-2	Visualizing the output.	Python/Flask/OpenCV
4.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem.
5.	Image Augmentation	Using ImageDataGenerator to pre-process the images.	Python
6.	Machine Learning Model - CNN	Classify the disaster from the given input data.	Python/ TensorFlow

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask, TensorFlow	Python, HTML, CSS
2.	Scalable Architecture	Deployed on IBM cloud for scalability	IBM Cloud
3.	Availability	Application is highly available as it is deployed on the IBM cloud	IBM Cloud
4.	Performance	• Tensor flow ensures the performance of the model using GPU of the host system. • Web pages are dynamic, so more interactive.	Python HTML, CSS, JS