Project Initialization and Planning Phase

Date	15 March 2024
Team ID	team-739735
Project Name	Natural Disasters Intensity Analysis and Classification using AI
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

Natural disasters such as floods, wildfires, earthquakes, and cyclones pose significant threats to human life, property, and the environment. One of the major challenges faced by disaster management authorities and emergency responders is the timely and accurate detection and classification of these disasters. Existing systems often struggle with image complexity, poor lighting conditions, and imbalanced data, making it difficult to identify the type and intensity of the disaster quickly. This delay in detection hampers immediate decision-making and response efforts, leading to greater damage and loss. Therefore, there is a critical need for an AI-based solution that can analyze real-time video feeds, accurately classify natural disasters, and provide actionable insights to assist in faster and more effective disaster response.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A disaster response authority or emergency management official.	Detect and classify natural disasters in real-time from video data.	There is no accurate and fast tool that can analyze live video frames for disaster detection.	Existing models struggle with complex image structures and imbalanced data.	Unprepared and delayed in taking action.
PS-2	A community affected by or vulnerable to natural disasters.	Receive timely alerts and assistance.	Current systems fail to identify the type and intensity of disasters promptly.	They rely on manual observation or slow traditional detection methods.	At risk, anxious, and lacking critical information during emergencies.